



Vapor Intrusion Evaluation March 2008 Sample Results, 163 Old River Road (Former Jono's Restaurant), Block 93, Edgewater, N.J.

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Executive Summary

This technical memorandum presents the results from the March 2008 sampling event conducted to evaluate whether a potential vapor intrusion pathway exists at the Tomaso's Ristorante building (the former Jono's Restaurant and Cantina), at 163 Old River Road, Edgewater, New Jersey. This sampling event was conducted as a follow-up to the vapor intrusion evaluations conducted in 2007. This memorandum recommends an additional sampling event for the winter of 2008–2009. The March 2008 sampling event—which included the collection of three indoor air samples, two subslab samples and one outdoor air sample—was performed under conservative operating conditions: during the heating season with the HVAC system and kitchen exhaust fans running and with all doors and windows closed.

It is reasonably probable to conclude from the results of the March 2008 sampling event that a potential vapor intrusion pathway is not causing unacceptable risk concentrations of potentially site-related constituents in indoor air. This conclusion is consistent with the results from two previously conducted evaluations of the potential vapor intrusion pathway at the building. The initial evaluation, submitted in April 2007 (CH2M HILL, 2007a), involved reviewing the existing site-characterization data at Block 93 and resulted in the conclusion that potential vapor intrusion pathways were unlikely to be complete in the building. The second evaluation, submitted in October 2007 (CH2M HILL, 2007b), examined groundwater-sampling data and geophysical survey data collected in June 2007 to provide further lines of evidence regarding the potential vapor intrusion pathway at the building. The results from the June 2007 groundwater-sampling event reinforced the initial assessment presented in the April 2007 vapor intrusion evaluation: that a potentially complete vapor intrusion pathway likely does not exist in the building.

Key conclusions from the sampling event conducted in March 2008 are as follows:

- No constituents were detected in indoor air at concentrations above the New Jersey Department of Environmental Protection (NJDEP) Rapid Action Levels (RALs) and

Health Department Notification Levels (HDNLs).¹ On the basis of these results, and in accordance with NJDEP guidance (NJDEP, 2005), there is no need for prompt action to further investigate or reduce potential exposures in the building and there is no need to notify state or local health departments.

- Six constituents were detected at concentrations above the lowest screening criteria in indoor air. Of these five constituents, two may be related to vapor intrusion: 1,2,4-trimethylbenzene and naphthalene. 1,2,4-trimethylbenzene is not a confirmed site-related constituent. The concentrations of these two compounds in indoor air exceeded only the lowest screening criteria and are not considered an unacceptable risk in indoor air.
- Three compounds were detected at concentrations above the non-cancer hazard quotient of 1.0 in subslab soil gas at Q2-VI-02: 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and total xylenes. The presence of these constituents in subslab soil gas is not causing an unacceptable risk in indoor air; 1,2,4-trimethylbenzene was detected at a concentration above the non-cancer hazard quotient of 0.1 but below the non-cancer hazard quotient of 1.0, and concentrations of 1,3,5-trimethylbenzene and total xylenes in indoor did not exceed the non-cancer hazard quotient of 0.1.
- Five compounds were detected at concentrations above the lowest and below the highest screening criteria in subslab soil gas at Q2-VI-02: chloroform, ethylbenzene, naphthalene, tetrachloroethene, and tetrahydrofuran. The presence of these constituents in subslab soil gas is not causing an unacceptable risk in indoor air; naphthalene was detected at a concentration above the non-cancer hazard quotient of 0.1 but below the non-cancer hazard quotient of 1.0. Chloroform was detected at a concentration above the 10^{-6} target cancer risk level but below the 10^{-5} target cancer risk level. Concentrations of ethylbenzene, tetrachloroethene, and tetrahydrofuran in indoor did not exceed the lowest screening criteria.

Recommendations based on this vapor intrusion sampling event are as follows:

- Conduct an additional vapor intrusion sampling event for the 2008–2009 heating season to confirm that indoor concentrations remain below the risk-based screening levels in indoor air. Constituents recommended for further monitoring are those that exceeded the lowest screening criteria in subslab soil gas or indoor air, as identified in Tables 1 and 2.
- The need for future vapor intrusion activities at the building will be determined on the basis of the results of the 2008–2009 heating season monitoring event and the remedy selected in the Record of Decision.

¹ RALS "represent trigger levels for the initiation of prompt action at occupied buildings to further investigate the vapor intrusion pathway and/or minimize impacts to building occupants through the implementation of an interim remedial measure." The HDNLs "indicate the need for the Department [of Environmental Protection] to inform the local and/or state health departments about the site and the associated vapor intrusion related indoor air concentrations for further evaluation and possible emergency actions." (NJDEP, 2007)

1 Introduction

This technical memorandum presents the results from the March 2008 sampling event conducted to evaluate vapor intrusion at the 163 Old River Road building, in Edgewater, New Jersey. The building sits on the Block 93 North property, west of the Quanta Resources property across River Road. It houses Tomaso's Ristorante, formerly Jono's Restaurant and Cantina; Tomaso's Ristorante opened for business in summer 2007, after the building had been vacant for several years.

The building is approximately 6,000 ft² and consists of two stories with a single-story front dining area. A detailed description of the building was provided in the initial evaluation (CH2M HILL, 2007a). Samples of indoor air, subslab soil gas, and outdoor air were collected at the building March 24 and 25, 2008 (see Section 2), as part of the supplemental vapor intrusion evaluation. Sampling was conducted according to the U.S. Environmental Protection Agency (USEPA)-approved "Vapor Intrusion Evaluation at 163 Old River Road Work Plan Addendum" (CH2M HILL 2008) and the USEPA-approved "Vapor Intrusion Evaluation Work Plan" (CH2M HILL 2006a). The 2008 addendum was modified as requested by the agencies during the March 20, 2008, site visit to include the full USEPA Method TO-15 constituent list.

Upon receipt of the preliminary data from the laboratory, the indoor air sample results were compared to NJDEP RALs and HDNLs to determine if there was a need for prompt action to further investigate or reduce potential exposures in the building and if there was a need to notify state or local health departments. Once the laboratory data were validated, the results of the indoor air and subslab soil gas samples were compared to site-specific screening criteria, which are presented Section 4.2. The indoor air sample results were also compared to the outdoor air sample results to determine if constituent detections were the result of background sources in ambient air. The observations made from these comparisons are presented in Section 4.

The purpose of this supplemental evaluation is to confirm that the vapor intrusion pathway is not causing unacceptable concentrations of site-related constituents in indoor air and to further refine the conceptual site model.

2 Sampling Methods

The March 2008 vapor intrusion evaluation at the building consisted of the following activities:

- Collecting indoor air samples at three locations for TO-15 full volatile organic compound (VOC) list analysis in accordance with the procedures set forth in the EPA-approved Quality Assurance Project Plan (QAPP)
- Installing permanent subslab soil gas probes at two locations within the building and collecting subslab soil gas samples from the probes for TO-15 full VOC list analysis
- Collecting one outdoor air sample at the southeast corner of the building for TO-15 full VOC list analysis.
- Performing a building inventory of potential interferences in the building.

During a site visit on March 20, 2008, NJDEP and USEPA reviewed and approved the sampling locations. (See Attachment A-1 for the sample location key.) Figures 1 and 2 show the indoor air and subslab sample locations.

The Summa™ canisters were managed and shipped to the laboratory under chain of custody procedures (Attachment B).

2.1 Building Inventory

The building inventory conducted on March 22, 2008, revealed activities taking place in the sampling area, such as chemical or storage use, which could influence the indoor air-sampling results. The pilot lights on the stoves were lit at the time of the sampling event. The building owner/manager informed the field team that a pesticide application occurs typically every 2 weeks around the perimeter of the building. Within the building, the project team observed various industrial cleaning products, primarily of the Ecolab® brand, including a grease cutter, glass cleaner, and detergent(s). These products are not expected to be significant indoor sources of VOCs.

2.2 Indoor Air Sampling

The CH2M HILL field team collected three indoor air samples—one in the kitchen on the countertop (Q2-IA-01), one in the first-floor dining room on a table near the center wall (Q2-IA-02), and one in the second floor dining room on a table in the southwest room (Q2-IA-03) (Figures 1 and 2). The team also collected indoor air samples over a 24-hour period using 6-L Summa™ canisters equipped with flow controllers. The Summa™ canisters were placed on either tables or countertops at a height approximately 4 feet above the ground (roughly breathing zone height). Pressure and temperature during the sampling event were obtained from the U.S. National Weather Service's Web site. The indoor air-sampling log is provided in Attachment A-2.

The field team performed indoor air sampling during conditions that were more conservative than typical operating conditions. The building was unoccupied during the sample collection period—from Monday morning to Tuesday morning—because the restaurant was closed. Doors and windows remained shut during that time. The field team checked back periodically to ensure that doors and windows remained closed and that nobody had entered the building. Under typical operating conditions, restaurant workers and customers would have been opening and closing the door; during warm weather months, the windows of the restaurant would have stayed open to allow outdoor air exchange. The heating system was set to operate at a typical temperature, i.e., 68°F. The vent fans over the stoves were turned on and left running for the entire sample collection period.

2.3 Subslab Soil Gas Sampling

Two subslab sample probes, consisting of stainless steel Swagelok® parts, were installed flush with the building floor using an industrial hand drill with concrete masonry drill bits. The foundation was approximately 5 inches thick at both subslab probe locations. The probe holes were sealed at the floor surface with mortar and checked for leaks using helium to ensure that ambient air was not introduced along with the subslab soil gas sample. Field team members collected samples at a flow rate of 200 mL/min (5-minute period) using Summa™ canisters with flow controllers, as described in the QAPP.

The field team successfully collected subslab samples from both of the installed probes—one in the storage room next to the stairs (Q2-VI-01), and one in the kitchen on the north side of the building, next to the water service closet (Q2-VI-02) (Figure 1). Subslab samples were collected over an approximately 5-minute period in 1-L Summa™ canisters equipped with critical orifices. The subslab soil gas-sampling log is provided as Attachment A-3.

2.4 Outdoor Air Sampling

One outdoor air sample was collected at the fence on the south side of the building (Q2-OA-01). Field team members collected the sample over a 24-hour period synoptically with the indoor air sampling using a Summa™ canister equipped with a flow controller, as described in the QAPP (CH2M HILL, 2005). The outdoor air-sampling log is provided in Attachment A-2.

3 Analytical Results

Columbia Analytical Services (CAS), in Simi Valley, California, performed the analyses using USEPA Method TO-15. CAS is certified for TO-15 analyses by NJDEP (NJ Certification No. CA009).

Analytical results from the indoor air, outdoor air, and subslab soil gas samples are presented in Attachment C.

A CH2M HILL chemist performed a data quality evaluation report (Attachment D). The QAPP amendment in the work plan describes the data quality evaluation procedures that address precision, accuracy, representativeness, completeness, and comparability parameters (CH2M HILL, 2006a). USEPA (1999, 2002) individual method requirements and guidelines were used in this data quality evaluation. The data quality evaluation reports indicate that the project goals for data precision and accuracy, as measured by field and laboratory quality control (QC) indicators, have been met, and that analyte and method objectives for completeness were met.

4 Vapor Intrusion Evaluation

The table to the right identifies constituents detected during the vapor intrusion sampling event that have also been detected in soil and/or groundwater samples at the Quanta site and therefore are potentially site-related. Also

presented are constituents detected in indoor air samples but potentially unrelated to the Quanta site. These constituents are discussed further in Section 4.6.

Potentially Site-Related (Confirmed Site Constituent)	Potentially Unrelated to the Quanta Site (Not a Confirmed Site-Related Constituent)
Benzene	Acrolein
Chloroform	Carbon tetrachloride
Ethylenzene	Tetrahydrofuran
Naphthalene	1,2,4-trimethylbenzene
Tetrachloroethene	1,3,5-trimethylbenzene
Trichloroethene	n-propylbenzene
Xylenes	

4.1 Data Comparison to NJDEP RALs and HDNLs

CH2M HILL compared the indoor air sample results, once they were received from the laboratory, to the NJDEP RALs and HDNLs. As stated in NJDEP's (2007) vapor intrusion guidance, RALs "represent trigger levels for the initiation of prompt action at occupied buildings to further investigate the VI pathway and/or minimize impacts to building occupants through the implementation of an interim remedial measure (IRM)." Exceedances of HDNLs "indicate the need for the Department [NJDEP] to inform the local and/or state health departments about the site and the associated vapor intrusion related indoor air concentrations for further evaluation and possible emergency actions."

The RALs and HDNLs were obtained from Table 2 of NJDEP's (2007) guidance; RALs not listed there were generated for constituents from the health-based indoor air screening levels provided in Table G-4 of the guidance, according to NJDEP (2005). This comparison is provided in Attachment E-1.

CH2M HILL received the preliminary data from the March 2008 sampling from the laboratory on April 10, 2008, and provided this data to the agencies for review on April 11, 2008.

There were no exceedances of the NJDEP RALs or HDNLs at any of the three indoor air sampling locations for any of the constituents; therefore, there is no need to notify state or local health departments and no need to implement IRMs.

4.2 Data Comparison to Indoor Air and Subslab Soil Gas Screening Criteria

Screening Criteria

The indoor air and subslab soil gas sample results were compared to the screening criteria listed in Attachments F-1 (indoor air) and F-2 (subslab). CH2M HILL updated the screening criteria identified in the original vapor intrusion evaluation work plan (CH2M HILL, 2006a) to stay current with NJDEP's screening levels, which were updated in March 2007. The field team developed the screening criteria using a combination of the USEPA Region 9 Preliminary Remediation Goals (PRGs) for ambient air and NJDEP generic vapor intrusion screening levels from Table 1 of the NJDEP (2007) vapor intrusion guidance. The only exception to these criteria is trichloroethene (TCE), for which CH2M HILL used the New York State Department of Health (NYSDOH) criterion of 5 µg/m³.

For indoor air screening criteria, CH2M HILL compared the USEPA PRGs for ambient air and the NJDEP residential Indoor Air Screening Levels and used the lesser of the two values. The field team calculated the subslab soil gas screening criteria from the indoor air criteria using an attenuation factor of 0.1. The screening criteria correspond to target risks of 10⁻⁶ to 10⁻⁴ for potentially carcinogenic constituents and hazard quotients of 0.1 and 1 for non-carcinogenic constituents.

CH2M HILL (2006b) reviewed the modified criterion for TCE in detail. The 5-µg/m³ indoor air value was derived by NYSDOH, who concluded that a concentration of 5 µg/m³ in air lies in the risk range of 1 × 10⁻⁶ to 1 × 10⁻⁴, which is generally used by regulatory agencies when making decisions (NYSDOH, 2003). For this evaluation the 5 µg/m³ is applied at the 10⁻⁴ target risk level and the corresponding subslab soil gas concentration at the 10⁻⁴ level is 50 µg/m³.

March 2008 Data Comparison

The comparison of the March 2008 indoor air and subslab soil gas analytical data to the screening criteria is provided in Attachments E-2 (indoor air) and E-3 (subslab soil gas). CH2M HILL offers the following overall observations resulting from this comparison:

- Concentrations of all carcinogenic constituents lie below the 10^{-5} target cancer-risk level at the three indoor air-sampling locations.
- Concentrations of most carcinogenic constituents in indoor air did not exceed the 10^{-6} target cancer-risk level, except for benzene, carbon tetrachloride, and chloroform.
- Concentrations of all carcinogenic constituents were below the 10^{-4} target cancer-risk level at the two subslab soil gas probes.
- Concentrations of most carcinogenic constituents were below the 10^{-5} target cancer-risk level at the two sampled subslab soil gas probes with the exception of chloroform at Q2-VI-01.
- Concentrations of most carcinogenic constituents were below the 10^{-6} target cancer-risk level at the two sampled subslab soil gas probes, except for chloroform at both probes and tetrachloroethene at Q2-VI-02.
- Concentrations of most non-carcinogenic constituents were below the cumulative non-cancer hazard quotient of 1.0 in indoor air, with the exception of acrolein. The acrolein exceedances occurred at Q2-IA-03 in the second-floor dining room.
- Concentrations of most non-carcinogenic constituents were below the cumulative non-cancer hazard quotient of 0.1 in indoor air, with the exception of acrolein, 1,2,4-trimethylbenzene, and naphthalene. The 1,2,4-trimethylbenzene exceedances occurred at Q2-IA-01, in the first-floor kitchen, and at Q2-IA-03, in the second-floor dining room.
- Concentrations of most non-carcinogenic constituents were below the cumulative non-cancer hazard quotient of 1.0 at the two subslab soil gas probes, with the exception of 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, acrolein, n-propylbenzene, and total xylenes. These exceedances occurred primarily at Q2-VI-02, the subslab probe in the kitchen, with the exception of acrolein, which occurred only at Q2-VI-01.
- Concentrations of most non-carcinogenic constituents were below the cumulative non-cancer hazard quotient of 0.1 at the two subslab soil gas probes, with the exception of 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, acrolein, ethylbenzene, naphthalene, n-propylbenzene, tetrahydrofuran, and total xylenes.

Evaluation of Aerobic Biodegradation Potential in Subslab Soil Gas

The NJDEP (2005) *Vapor Intrusion Guidance* states that several petroleum hydrocarbons have been documented to degrade under aerobic conditions. Due to this degradation potential, the guidance lists a 10-fold degradation factor that is applied to a specific list of hydrocarbons that includes benzene, toluene, ethylbenzene, and xylenes. The attenuation factor is used when a minimum of 4 percent oxygen exists in the soil column beneath the structure (or proposed structure in the case of this site).

Petroleum hydrocarbons readily degrade to carbon dioxide in the presence of oxygen by microbes in soil within the vadose zone. The subslab soil gas samples were analyzed for oxygen and carbon dioxide to evaluate the potential for aerobic biodegradation in the subsurface vadose zone. The sample results are provided in Attachment C-1.

In both samples the concentration of oxygen was 21.9 percent, and carbon dioxide was not detected. This indicates that although there is ample oxygen present to allow for biodegradation, the existing measured oxygen and carbon dioxide levels indicate that aerobic biodegradation is limited or not occurring.

4.3 Data Comparison by Sample Location

Indoor Air

The three indoor air sample locations yielded similar constituent concentrations (Attachment C-2), confirming the previous building characteristic observation that the relatively large indoor air volume is well connected within the building. In general, the highest detections of constituents occurred at Q2-IA-01 (first-floor kitchen) and the lowest detections occurred at Q2-IA-02 (first-floor dining room).

Subslab Soil Gas

Significantly higher detections of at least one order of magnitude were observed at Q2-VI-02 (kitchen) for 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, ethylbenzene, n-propylbenzene, tetrahydrofuran, and total xylenes. Exceedances of the non-cancer hazard quotient of 1.0 occurred only at Q2-VI-02.

4.4 Potential Constituents of Interest

CH2M HILL evaluated the constituents detected in indoor air or subslab soil gas above the lowest screening criteria – that is, 10^{-6} target cancer-risk level or non-cancer hazard quotient of 0.1 – to determine if they are related to the site and/or vapor intrusion and should therefore be considered as constituents of interest for vapor intrusion.

The confirmed site-related constituents that were detected in either indoor air or subslab soil gas above the lowest screening criteria are benzene, chloroform, ethylbenzene, naphthalene, tetrachloroethene, and total xylenes. It is reasonably probable to conclude from a comparison of subslab, indoor air and outdoor air sample results that indoor air concentrations of benzene, chloroform, ethylbenzene, and tetrachloroethene are not the related to a potential vapor intrusion pathway. Indoor air concentrations of naphthalene (above the cumulative non-cancer hazard quotient of 0.1 but below the hazard quotient of 1.0) and total xylenes (below the cumulative non-cancer hazard quotient of 0.1) are probably related to a potential vapor intrusion pathway.

The constituents not confirmed to be site related that were detected above the lowest screening criteria in either indoor air or subslab soil gas are 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, acrolein, carbon tetrachloride, n-propylbenzene and tetrahydrofuran. It is reasonably probable to conclude from a comparison of subslab, indoor air and outdoor air sample results that indoor air concentrations of acrolein, carbon tetrachloride, n-propylbenzene, and tetrahydrofuran are not the related to a potential vapor intrusion pathway. Indoor air concentrations of 1,2,4-trimethylbenzene (above the cumulative non-

cancer hazard quotient of 0.1 but below the hazard quotient of 1.0) and 1,3,5-trimethylbenzene (below the cumulative non-cancer hazard quotient of 0.1) are probably related to a potential vapor intrusion pathway.

Constituents Confirmed to Be Site Related

Benzene.

Benzene was identified as a constituent of concern in soil and groundwater in the OU1 RI. The benzene detections in indoor air do not appear to be related to vapor intrusion; detections of benzene were comparable to outdoor air detections though not detected in subslab soil gas. Benzene should be included on the analyte list for future vapor intrusion sampling events because it is a confirmed site constituent, but further action is not necessary.

Chloroform.

Chloroform was identified in the OU1 RI as a constituent of interest in groundwater but not in soil. Chloroform was not detected in the shallow groundwater samples collected at the Block 93 North property for the October 2007 evaluation (CH2M HILL, 2007b). Chloroform was detected at one of the three indoor air sample locations (Q2-IA-01) at a concentration above the 10^{-6} target cancer-risk level; however, chloroform was not detected at the duplicate sample collected at this same location. Chloroform was detected at both subslab probes at concentrations above the 10^{-6} target cancer-risk level; the concentration at Q2-VI-01 also exceeded the 10^{-5} target cancer-risk level. Chloroform should be included on the analyte list for future vapor intrusion sampling events, but further action is not necessary.

Ethylbenzene.

Ethylbenzene was identified as a constituent of concern in soil and groundwater in the OU1 RI. Concentrations of ethylbenzene did not exceed the cumulative non-cancer hazard quotient of 0.1 in any of the indoor air samples in March 2008. The concentrations of ethylbenzene detected in indoor air were comparable to the concentration detected in outdoor air. Concentrations of ethylbenzene exceeded the non-cancer hazard quotient of 0.1 at Q1-VI-02. Detections of ethylbenzene in subslab soil gas and indoor air indicate that it may be a vapor-intrusion-related constituent. However, the detections of this constituent in the indoor air did not exceed the lowest screening criterion, the non-cancer hazard quotient of 0.1. Ethylbenzene should be included on the analyte list for future vapor intrusion sampling events, but further action is not necessary.

Naphthalene.

Naphthalene was identified in the OU1 RI as a constituent of concern in soil and groundwater. Concentrations of naphthalene were above the cumulative non-cancer hazard quotient of 0.1 but below the cumulative non-cancer hazard quotient of 1.0 at the three indoor air locations in March 2008. Naphthalene was detected in the outdoor air sample at a concentration less than the indoor air samples but within the same order of magnitude. Concentrations of naphthalene exceeded the cumulative non-cancer hazard quotient of 0.1 at one of the two subslab probes. Detections of naphthalene in subslab soil gas and indoor air indicate that it may be a vapor-intrusion-related constituent. However, the detections of this constituent in the indoor air and subslab soil gas did not exceed the lowest screening criterion, the non-cancer hazard quotient of 0.1. Naphthalene should be included on the analyte list for future vapor intrusion sampling events, but further action is not necessary.

Tetrachloroethene.

Tetrachloroethene was identified in the OU1 RI as a constituent of concern in soil and groundwater. Concentrations of tetrachloroethene did not exceed the 10^{-6} target cancer-risk level in any of the indoor air samples in March 2008. Concentrations of tetrachloroethene exceeded the 10^{-6} target cancer-risk level at Q1-VI-02. Detections of tetrachloroethene in subslab soil gas and indoor air indicate that it may be a vapor-intrusion-related constituent. However, the detections of this constituent in the indoor air did not exceed the lowest screening criterion, the 10^{-6} target cancer-risk level. n-propylbenzene should be included on the analyte list for future vapor intrusion sampling events, but further action is not necessary.

Total Xylenes.

Total xylenes were identified in the OU1 RI as a constituent of concern in soil and groundwater. Concentrations of total xylenes did not exceed the cumulative non-cancer hazard quotient of 0.1 in any of the indoor air samples in March 2008. Concentrations of total xylenes exceeded the non-cancer hazard quotient of 0.1 at Q1-VI-01 and the non-cancer hazard quotient of 1.0 at Q1-VI-02. Detections of total xylenes in subslab soil gas and indoor air indicate that it may be a vapor-intrusion-related constituent. However, the detections of this constituent in the indoor air did not exceed the lowest screening criterion, the non-cancer hazard quotient of 0.1. Total xylenes should be included on the analyte list for future vapor intrusion sampling events, but further action is not necessary.

Constituents Not Confirmed to Be Site-Related

1,2,4-trimethylbenzene.

1,2,4-trimethylbenzene was not analyzed for in OU1 remedial investigation (RI) groundwater samples. It was detected in some OU1 RI soil samples below the screening criteria. Concentrations of 1,2,4-trimethylbenzene did not exceed the cumulative non-cancer hazard quotient of 1.0 in any of the indoor air samples in March 2008, but did exceed the cumulative non-cancer hazard quotient of 0.1 at two of the three locations—specifically, at Q2-IA-01 (first-floor kitchen) and Q2-IA-03 (second-floor dining room).

Concentrations of 1,2,4-trimethylbenzene exceeded the non-cancer hazard quotient of 0.1 at Q1-VI-01 and the non-cancer hazard quotient of 1.0 at Q1-VI-02. Detections of 1,2,4-trimethylbenzene in subslab soil gas and indoor air indicate that it may be a vapor-intrusion-related constituent. However, the detections of this constituent in the indoor air exceeded only the lowest screening criterion, the non-cancer hazard quotient of 0.1. 1,2,4-trimethylbenzene should be included on the analyte list for future vapor intrusion sampling events, but further action is not necessary.

1,3,5-trimethylbenzene.

1,3,5-trimethylbenzene was not analyzed for in OU1 RI groundwater or soil samples. Concentrations of 1,3,5-trimethylbenzene did not exceed the cumulative non-cancer hazard quotient of 0.1 in any of the indoor air samples in March 2008. Concentrations of 1,3,5-trimethylbenzene exceeded the non-cancer hazard quotient of 0.1 at Q1-VI-01 and the non-cancer hazard quotient of 1.0 at Q1-VI-02. Detections of 1,3,5-trimethylbenzene in subslab soil gas and indoor air indicate that it may be a vapor-intrusion-related constituent. However, the detections of this constituent in the indoor air did not exceed the lowest screening criterion, the non-cancer hazard quotient of 0.1 of 1,3,5-trimethylbenzene should

be included on the analyte list for future vapor intrusion sampling events, but further action is not necessary.

Acrolein.

Acrolein² was not included on the analyte list in previous vapor intrusion sampling events and was either not analyzed for or not detected in the soil and groundwater samples collected during the OU1 RI. This constituent is a combustion byproduct present in cigarette smoke and automobile exhaust. Acrolein was detected at a concentration in exceedance of the non-cancer hazard quotient of 1.0 in one of the two subslab probes and at one of the three indoor air locations in March 2008. There are two reasons to suspect that detections of acrolein in indoor samples may not be site related or vapor intrusion related:

- Acrolein was not detected at either of the two first-floor indoor air locations (Q2-IA-01 and Q2-IA-02) but it was detected at the second-floor location (Q2-IA-03). Detections of all other constituents at Q2-IA-03 were less than or comparable to detections at Q2-IA-01.
- Acrolein was detected at subslab probe Q2-VI-01 but not at Q2-VI-02, which for most other constituents had significantly higher detections than Q2-VI-01.

Carbon Tetrachloride.

Carbon tetrachloride has not been identified as a constituent of interest in the soil or groundwater in the OU1 RI. The carbon tetrachloride detections in indoor air do not appear to be related to vapor intrusion; detections in indoor air, subslab soil gas, and outdoor air were all comparable. No further action is necessary, and carbon tetrachloride does not need to be included on the analyte list for future vapor intrusion sampling events.

n-propylbenzene.

The field team did not analyze for n-propylbenzene in OU1 RI groundwater or soil samples. Concentrations of n-propylbenzene did not exceed the cumulative non-cancer hazard quotient of 0.1 in any of the indoor air samples from March 2008. Concentrations of 1,3,5-trimethylbenzene exceeded the non-cancer hazard quotient of 0.1 at Q1-VI-02. Detections of n-propylbenzene in subslab soil gas and indoor air indicate that it may be a vapor-intrusion-related constituent. However, the detections of this constituent in the indoor air did not exceed the lowest screening criterion, the 0.1 non-cancer hazard quotient. n-propylbenzene should be included on the analyte list for future vapor intrusion sampling events, but further action is not necessary.

Tetrahydrofuran.

Tetrahydrofuran was not included on the analyte list in previous vapor-intrusion-sampling events, nor was it analyzed for in OU1 RI groundwater or soil samples. Tetrahydrofuran was not detected in any of the three indoor air samples. Concentrations of tetrahydrofuran exceeded the non-cancer hazard quotient of 0.1 at Q1-VI-02. Tetrahydrofuran should be included on the analyte list for future vapor intrusion sampling events, but further action is not necessary.

² Acrolein is commonly found in automobile exhaust and cigarette smoke and is formed from the burning of trees and other plants, gasoline, and oils (ATSDR ToxFAQs™, www.atsdr.cdc.gov/tfacts124.html#bookmark02).

4.5 Revisions to the Vapor Intrusion Conceptual Site Model

The indoor and subslab soil gas data obtained from the March 2008 sampling event were used to update the conceptual site model that was presented in the October 2007 evaluation (CH2M HILL, 2007b).

The following are the revisions to the previous vapor intrusion conceptual site model:

- The maximum soil gas concentrations of BTEX and naphthalene that were modeled from the shallow groundwater data in the October 2007 evaluation (CH2M HILL, 2007b) were compared to the maximum subslab soil concentrations of these constituents in March 2008. This comparison is shown in Table 4.
 - Naphthalene was identified in the October 2007 evaluation as the only potential constituent of interest for vapor intrusion at the building (CH2M HILL, 2007b). However, based on the March 2008 sample data, naphthalene was below the non-cancer hazard quotient of 1.0 at the three indoor air locations. In addition, naphthalene was below the non-cancer hazard quotient of 0.1 at one subslab sample location and below the non-cancer hazard quotient of 1.0 at both subslab sample locations. The maximum soil gas concentration modeled from the July 2007 shallow groundwater sampling was 59.64 µg/m³, compared to the maximum subslab soil gas concentration of 3.2 µg/m³ detected in the March 2008 event. Figure 3 shows the June 2007 groundwater grab sample data and the March 2008 subslab soil gas sample data.
 - The maximum modeled soil gas concentrations from October 2007 of ethylbenzene and total xylenes were considerable lower (by three orders of magnitude) than the maximum March 2008 subslab soil gas concentrations.
- The results of the March 2008 sampling event confirm the previous conclusions from the April and October 2007 evaluations that building characteristics are precluding a vapor intrusion pathway at the building. A comparison of subslab soil gas data to indoor air data for potential constituents of concern that are probably vapor intrusion related yields large attenuation factors: 0.0005 for 1,2,4-trimethylbenzene, 0.0006 for 1,3,5-trimethylbenzene, and 0.0003 for total xylenes. The calculated attenuation factor for naphthalene was 0.1938, but this value is skewed because naphthalene was detected in outdoor air, and the detection of naphthalene in subslab soil gas was relatively low compared to other constituents. The calculation of attenuation factors is presented in Table 5. The specific building characteristics are the following:
 - The slab underlying the building is relatively thick (from 6 inches to 2 feet) and is in good condition, with relatively few penetrations.
 - Inhabited areas are generally elevated 1.5 to 3 feet above the ground surface. There is an approximately 4-inch annular space above the floor in the inhabited areas. This annular space is under the dining room floor and is filled with insulation. If soil vapor were able to migrate through the slab, it would still have to travel through this insulation-filled space and then the dining room floor to reach indoor air.

- The indoor air volume is relatively large and is connected throughout the building. The dining area contains an upstairs portion, providing an approximate ceiling height of 20 feet. The ceiling in the kitchen and store room is 8 to 10 feet high.
- The kitchen hoods and exhaust fans are operational when the building is occupied. There are also ceiling fans in the dining areas. The exhaust fans and ceiling fans increase the air exchange rate within the building.

5 Conclusions

The results from the March 2008 vapor intrusion sampling event at the 163 Old River Road building indicate that a potential vapor intrusion pathway is not causing unacceptable concentrations of site-related constituents in indoor air.

No constituents were detected in indoor air at concentrations above NJDEP RALs and HDNLs. Based on these results, in accordance with the NJDEP (2005) vapor intrusion guidance, there is no need for prompt action to further investigate or reduce potential exposures in the building, and there is no need to notify state or local health departments.

Six constituents were detected at concentrations above the lowest screening criteria in indoor air. Of these six constituents, two are probably related to vapor intrusion: 1,2,4-trimethylbenzene and naphthalene. 1,2,4-trimethylbenzene is not a confirmed site-related constituent. The concentrations of these two compounds in indoor air exceeded only the lowest screening criteria and are not considered an unacceptable risk in indoor air.

Three compounds were detected at concentrations above the non-cancer hazard quotient of 1.0 in subslab soil gas at Q2-VI-02: 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and total xylenes. The presence of these constituents in subslab soil gas is not causing an unacceptable risk in indoor air; 1,2,4-trimethylbenzene was detected at a concentration above the non-cancer hazard quotient of 0.1 but below the non-cancer hazard quotient of 1.0, and concentrations of 1,3,5-trimethylbenzene and total xylenes in indoor did not exceed the non-cancer hazard quotient of 0.1.

Five compounds were detected at concentrations above the lowest and below the highest screening criteria in subslab soil gas at Q2-VI-02: chloroform, ethylbenzene, naphthalene, tetrachloroethene, and tetrahydrofuran. The presence of these constituents in subslab soil gas is not causing an unacceptable risk in indoor air. Naphthalene was detected at a concentration above the non-cancer hazard quotient of 0.1 but below the non-cancer hazard quotient of 1.0. Chloroform was detected at a concentration above the 10^{-6} target cancer risk level but below the 10^{-5} target cancer risk level. Concentrations of ethylbenzene, tetrachloroethene, and tetrahydrofuran in indoor did not exceed the lowest screening criteria.

The March 2008 sample data confirms the previous observation that building characteristics may preclude a vapor intrusion pathway. These characteristics include the relatively large and connected indoor air volume, the thick slab (from 6 inches to 2 feet), and the elevated dining room floor.

6 Recommendations for Further Action

An additional monitoring event is proposed for the 2008–2009 heating season at the 163 Old River Road building. This additional monitoring will verify that indoor air concentrations of site-related or potentially site-related constituents remain below acceptable risk levels. The monitoring event will include the following activities:

- Indoor air sample collection at the same three March 2008 indoor air sample locations (Q2-IA-01, Q2-IA-02, and Q2-IA-03)
- Subslab soil gas sample collection at the two existing subslab probes
- Outdoor air sample collection at the same March 2008 outdoor air location (Q2-OA-01)

A revised analyte list is proposed for the winter 2008–2009 vapor intrusion sampling event. Constituents recommended for further monitoring are those that exceeded the lowest screening criteria in subslab soil gas or indoor air, as identified in Tables 1 and 2. These constituents are 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, acrolein, benzene, carbon tetrachloride, chloroform, ethylbenzene, naphthalene, n-propylbenzene, tetrachloroethene, tetrahydrofuran, and total xylenes.

The need for additional vapor intrusion activities at the 163 Old River Road building will be evaluated on the basis of the results of 2008–2009 heating season monitoring event and the final remedy set forth in the Quanta Site Record of Decision.

7 References

- CH2M HILL. 2005. Quality Assurance Project Plan, Operable Unit 1. Quanta Resources Site, Edgewater, NJ. October.
- CH2M HILL. 2006a. Vapor Intrusion Evaluation Work Plan for the Quanta Resources Site, Edgewater, New Jersey. January 25. (Revised March 2006).
- CH2M HILL. 2006b. Vapor Intrusion Evaluation at 115 River Road Building, Edgewater, New Jersey. October.
- CH2M HILL. 2007a. Technical Memorandum: Vapor Intrusion Evaluation at 163 River Road Building (Jono's Restaurant). April.
- CH2M HILL. 2007b. Technical Memorandum: Updated Vapor Intrusion Evaluation at 163 River Road (Former Jono's Restaurant). October.
- CH2M HILL. 2008. Vapor Intrusion Evaluation at 163 Old River Road Work Plan Addendum. March.
- NJDEP (New Jersey Department of Environmental Protection). 2005. *Vapor Intrusion Guidance*. Site Remediation and Waste Management Program. Trenton.
- NJDEP (New Jersey Department of Environmental Protection). 2007. Revisions to *Vapor Intrusion Guidance*. Site Remediation and Waste Management Program. Trenton. Available at <http://www.nj.gov/dep/srp/guidance/vaporintrusion/vig.htm>.

USEPA (U.S. Environmental Protection Agency). 1999. Contract Laboratory National Functional Guidelines for Organic Data Review. *EPA540/R-99/008*.

USEPA (U.S. Environmental Protection Agency). 2002. OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance). *EPA530-D-02-004*.

Tables

TABLE 1

Screening of Vapor Intrusion Potential Constituents of Interest Based on Indoor Air Data - March 2008
163 Old River Road Building
Quanta Site, Edgewater, New Jersey

Constituents warranting further evaluation based on screening indoor air data against lowest screening levels	Chemicals that <u>should not require further evaluation</u> based on screening indoor air data against lowest screening levels	Constituents where reporting limits were discussed further - constituents were not evaluated further for vapor intrusion potential	
Constituents detected above lowest screening level in at least one sample	Constituents detected at concentrations less than the lowest screening level	Constituents not detected and reporting limits are below lowest screening level	Constituents not detected, but reporting limits are above lowest screening level in some samples
1,2,4-TRIMETHYLBENZENE	1,1,2-TRICHLOROTRIFLUOROETHANE	1,1,1-TRICHLOROETHANE	1,1,2,2-TETRACHLOROETHANE
ACROLEIN	1,2,4-TRIMETHYLBENZENE	1,1-DICHLOROETHANE	1,1,2-TRICHLOROETHANE
BENZENE	1,3,5-TRIMETHYLBENZENE	1,1-DICHLOROETHENE	1,2,4-TRICHLOROBENZENE
CARBON TETRACHLORIDE	1,4-DICHLOROBENZENE	1,2-DICHLOROBENZENE	1,2-DIBROMO-3-CHLOROPROPANE
CHLOROFORM	4-METHYL-2-PENTANONE	1,3-DICHLOROBENZENE	1,2-DIBROMOETHANE (EDB)
NAPHTHALENE	ACETIC ACID, ETHYL ESTER	2-BUTANONE (MEK)	1,2-DICHLOROETHANE
	ACETONITRILE	4-METHYL-2-PENTANONE	1,2-DICHLOROPROPANE
	CHLOROMETHANE	ACETONE	1,3,5-TRIMETHYLBENZENE
	DICHLORODIFLUOROMETHANE	ALLYL CHLORIDE	1,3-BUTADIENE
	ETHYLBENZENE	BROMOFORM	1,4-DIOXANE
	METHYLENE CHLORIDE	CARBON DISULFIDE	ACROLEIN
	N-HEXANE	CHLOROBENZENE	ACRYLONITRILE
	N-PROPYLBENZENE	CHLOROETHANE	BENZENE, (CHLOROMETHYL)-
	O-XYLENE	CIS-1,2-DICHLOROETHENE	BROMODICHLOROMETHANE
	STYRENE	CYCLOHEXANE	BROMOMETHANE
	TETRACHLOROETHENE	ISOPROPYLBENZENE	CHLORODIBROMOMETHANE
	TOLUENE	METHYL METHACRYLATE	CHLOROFORM
	TRICHLOROFUOROMETHANE	METHYL TERT-BUTYL ETHER (MTBE)	CIS-1,3-DICHLOROPROPENE
	XYLENES, M & P	N-PROPYLBENZENE	HEXAChLOROBUTADIENE
	XYLENES, TOTAL - sum of isomers	STYRENE	TETRAHYDROFURAN
		TRANS-1,2-DICHLOROETHENE	TRANS-1,3-DICHLOROPROPENE
		VINYL ACETATE	TRICHLOROETHENE
			VINYL CHLORIDE

TABLE 2

Screening of Vapor Intrusion Potential Constituents of Interest in Subslab Samples - March 2008
 163 Old River Road Building
 Quanta Site, Edgewater, New Jersey

Constituents warranting further evaluation based on screening soil gas data against lowest screening levels	Chemicals that should not require further evaluation based on screening soil gas data against lowest screening levels	Constituents not detected and reporting limits are below lowest screening level	Constituents where reporting limits were discussed further - constituents were not evaluated further for vapor intrusion potential
Constituents detected above lowest screening level in at least one sample	Constituents detected at concentrations less than the lowest screening level	Constituents not detected and reporting limits are below lowest screening level	Constituents not detected, but reporting limits are above lowest screening level in some samples
1,2,4-TRIMETHYLBENZENE	1,1,2-TRICHLOROTRIFLUOROETHANE	1,1,1-TRICHLOROETHANE	1,1,2,2-TETRACHLOROETHANE
1,3,5-TRIMETHYLBENZENE	2-BUTANONE (MEK)	1,1,2-TRICHLOROTRIFLUOROETHANE	1,1,2-TRICHLOROETHANE
ACROLEIN	4-METHYL-2-PENTANONE	1,1-DICHLOROETHANE	1,2-DIBROMOETHANE (EDB)
CHLOROFORM	ACETIC ACID, ETHYL ESTER	1,1-DICHLOROETHENE	1,2-DICHLOROETHANE
ETHYLBENZENE	ACETONITRILE	1,2,4-TRICHLOROBENZENE	1,2-DICHLOROPROPANE
NAPHTHALENE	CARBON DISULFIDE	1,2-DIBromo-3-CHLOROPROPANE	1,3-BUTADIENE
N-PROPYLBENZENE	CARBON TETRACHLORIDE	1,2-DICHLOROBENZENE	1,4-DICHLOROBENZENE
O-XYLENE	CHLOROMETHANE	1,3-DICHLOROBENZENE	1,4-DIOXANE
TETRACHLOROETHENE	DICHLORODIFLUOROMETHANE	1,4-DICHLOROBENZENE	ACROLEIN
TETRAHYDROFURAN	ETHYLBENZENE	ACETONE	ACRYLONITRILE
XYLENES, M & P	ISOPROPYLBENZENE	ACETONITRILE	ALLYL CHLORIDE
XYLENES, TOTAL - sum of isomers	NAPHTHALENE	BENZENE	BENZENE
	N-PROPYLBENZENE	BROMOFORM	BENZENE, (CHLOROMETHYL)-
	O-XYLENE	BROMOMETHANE	BROMODICHLOROMETHANE
	TETRACHLOROETHENE	CARBON DISULFIDE	BROMOFORM
	TOLUENE	CHLOROBENZENE	CARBON TETRACHLORIDE
	TRICHLORODIFLUOROMETHANE	CHLOROETHANE	CHLORODIBROMOMETHANE
	VINYL ACETATE	CHLOROMETHANE	CHLOROETHANE
		CIS-1,2-DICHLOROETHENE	CIS-1,3-DICHLOROPROPENE
		CYCLOHEXANE	HEXACHLOROBUTADIENE
		METHYL METHACRYLATE	METHYL TERT-BUTYL ETHER (MTBE)
		METHYL TERT-BUTYL ETHER (MTBE)	METHYLENE CHLORIDE
		METHYLENE CHLORIDE	TETRAHYDROFURAN
		N-HEXANE	TRANS-1,3-DICHLOROPROPENE
		STYRENE	TRICHLOROETHENE
		TRANS-1,2-DICHLOROETHENE	VINYL CHLORIDE
		VINYL ACETATE	

TABLE 3

Sample Results for Potential Constituents of Concern - March 2008
163 Old River Road Building
Quanta Site, Edgewater, New Jersey

Constituent	Concentrations in Air ($\mu\text{g}/\text{m}^3$)						
	Subslab Soil Gas			Indoor Air			Outdoor Air
	Q2-VI-01	Q2-VI-02	Q2-IA-01	Q2-IA-01 Duplicate	Q2-IA-02	Q2-IA-03	Q2-OA-01
1,2,4-Trimethylbenzene	25	2,100	1	0.91 J	0.41 J	1.1	0.37 J
1,3,5-Trimethylbenzene	9	690	0.38 J	0.3 J	ND (0.95)	0.38 J	ND (0.61)
Acrolein	2.3	ND (1.8)	ND (0.6)	ND (1.1)	ND (1.0)	0.95	ND (0.66)
Benzene	ND (1.9)	ND (5.9)	1	0.85	0.76	0.81	0.81
Carbon Tetrachloride	0.42 J	ND (5.9)	0.31 J	0.44 J	0.39 J	0.47 J	0.47 J
Chloroform	8.7	1.4 J	0.23 J	ND (0.96)	ND (0.95)	ND (0.79)	ND (0.61)
Ethylbenzene	50	1,500	0.65 J	0.57 J	0.35 J	0.43 J	0.36 J
Naphthalene	0.46 J	3.2 J	0.62	0.38	0.32	0.42	0.14
n-Propylbenzene	4.6	330	0.26 J	ND (0.96)	ND (0.95)	0.22 J	ND (0.61)
Tetrachloroethene	2.1	4.2 J	0.31 J	0.27 J	0.3 J	0.28 J	0.28 J
Tetrahydrofuran	ND (1.9)	7.9	ND (0.96)	ND (0.96)	ND (0.95)	ND (0.79)	ND (0.61)
m&p-Xylenes	190	8,100	2.5	2.3	1.3 J	1.6	0.41 J
o-Xylene	66	3,500	0.97	0.86 J	0.45 J	0.61 J	1.2
Total Xylenes	256	11,600	3.47	3.16 J	1.75 J	2.21 J	1.61 J

Notes:

n = number of samples

J = Data below calibration curve for that constituent, quantity estimated.

ND = Non Detected

(3 ND) = number of samples with non detect out of the total number of samples

ND (0.06) = RL for non detects

TABLE 4
 Comparison of Concentrations of Potential Constituents of Concern - October 2007 and March 2008
163 Old River Road Building
Quanta Site, Edgewater, New Jersey

Constituent	Concentrations in Air ($\mu\text{g}/\text{m}^3$)	
	Max Modeled Soil Gas Concentration from October 2007	Max Subslab Soil Gas Concentration from March 2008
Benzene	9.30	ND (5.9)
Ethylbenzene	2.06	1,500
Toluene	0.86	9.40
Total Xylenes	1.83	11,600
Naphthalene	59.64	3.2 J

Notes:

J = Data below calibration curve for that constituent, quantity estimated.

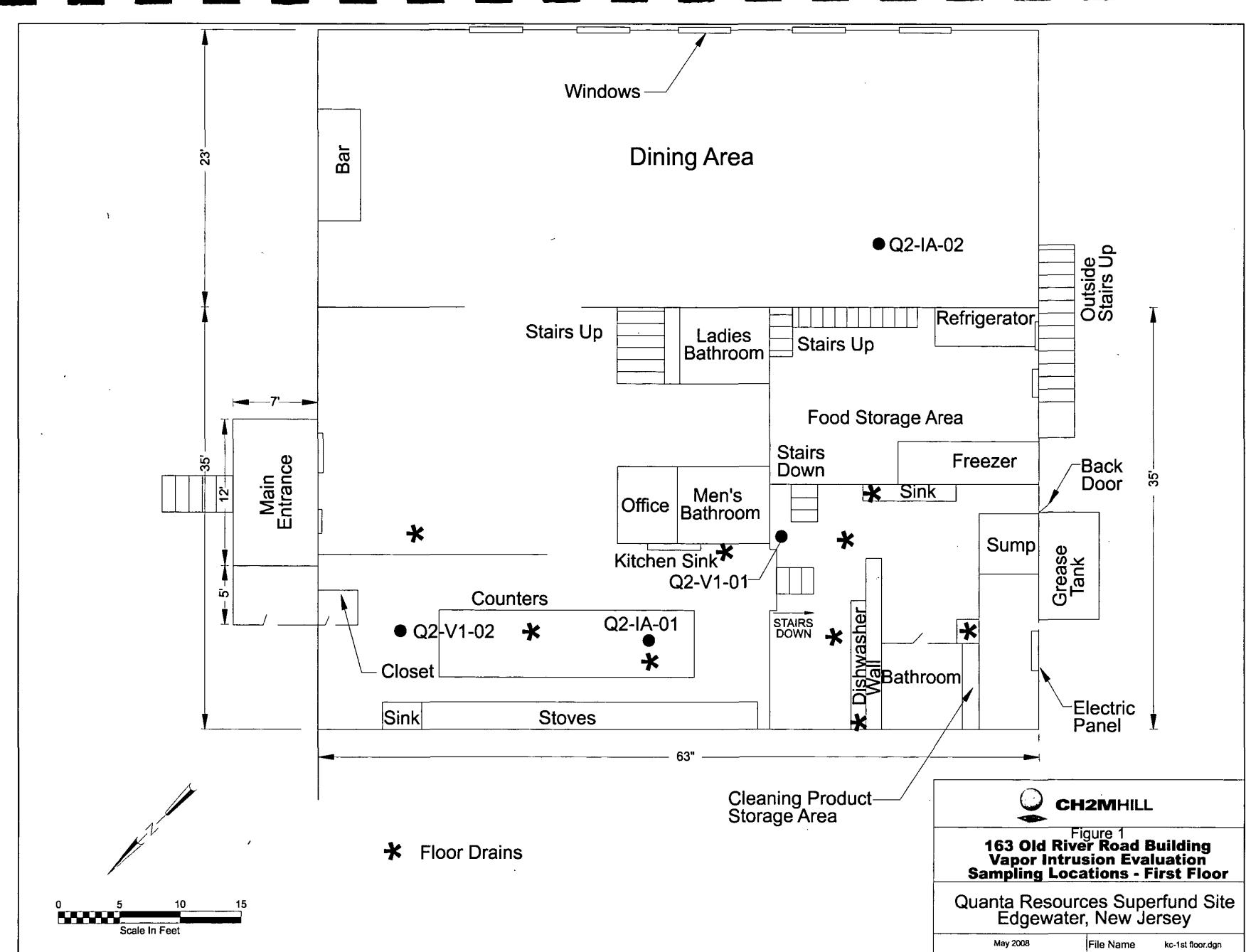
TABLE 5
Attenuation Factors for Potential Constituents of Concern Related to Vapor Intrusion - March 2008
163 Old River Road Building
Quanta Site, Edgewater, New Jersey

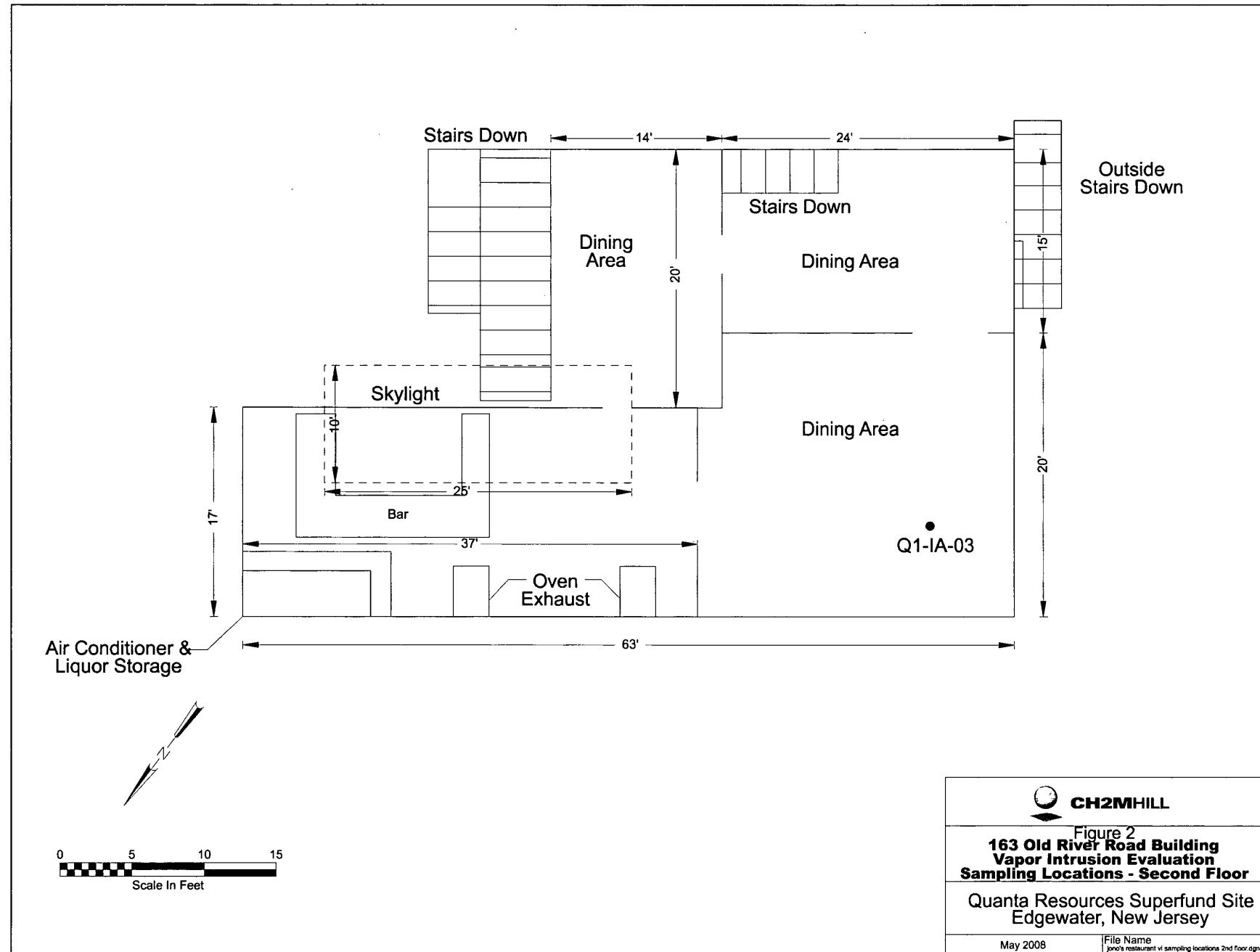
Constituent	Concentrations in Air ($\mu\text{g}/\text{m}^3$)			Attenuation Factor
	Max Subslab Soil Gas Detection	Max Indoor Air Detection		
1,2,4-Trimethylbenzene	2,100	1		0.0005
1,3,5-Trimethylbenzene	690	0.38 J		0.0006
Naphthalene	3.2 J	0.62		0.1938
Total Xylenes	11,600	3.47		0.0003

Notes:

J = Data below calibration curve for that constituent, quantity estimated.

Figures





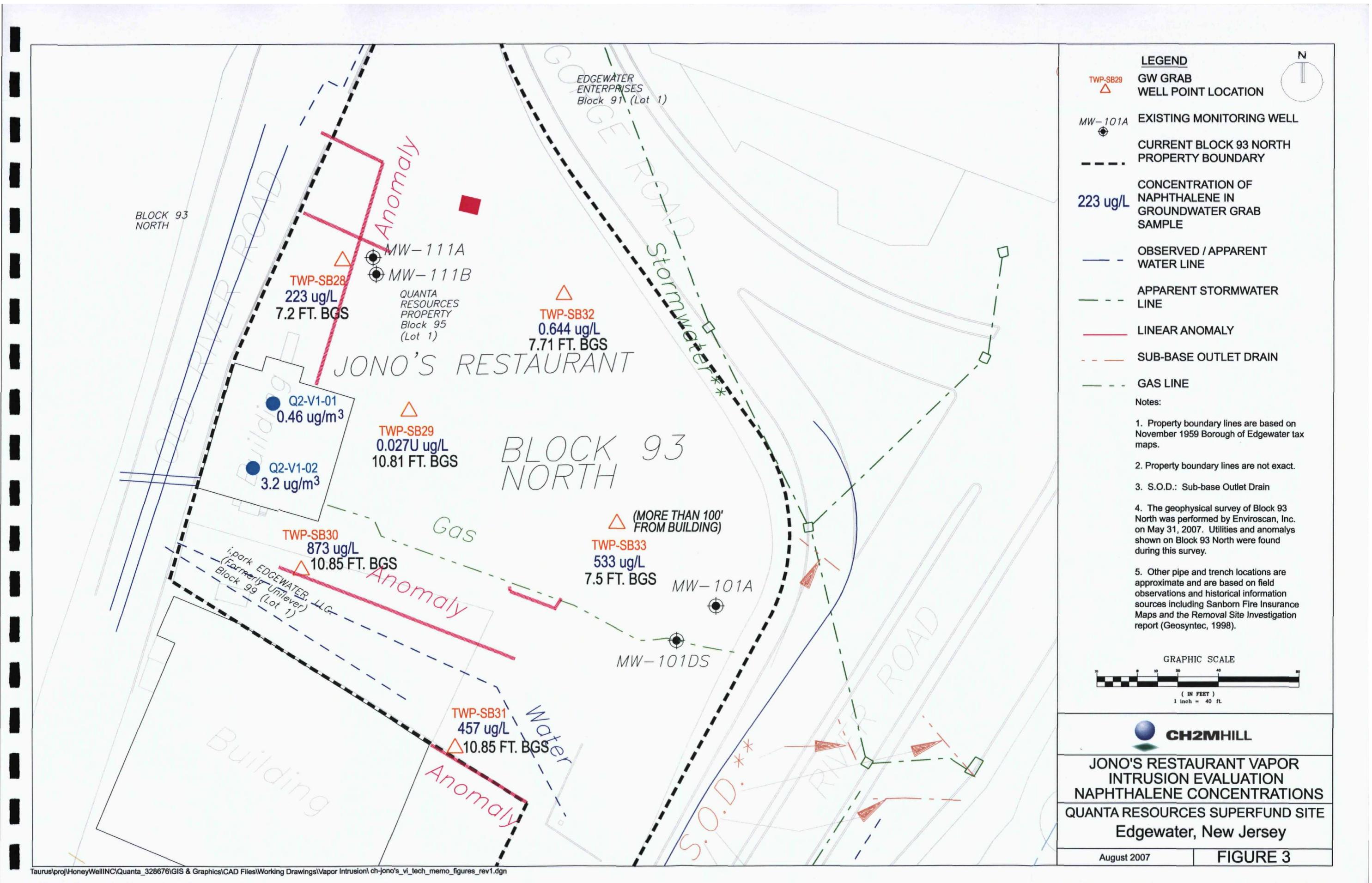
 CH2MHILL

Figure 2
163 Old River Road Building
Vapor Intrusion Evaluation
Sampling Locations - Second Floor

Quanta Resources Superfund Site
Edgewater, New Jersey

May 2008

File Name
jono's restaurant vi sampling locations 2nd floor.dgn



Attachment A
Sample Location Key and Sampling Logs

ATTACHMENT A-1

Sample Location Key - March 2008
163 Old River Road Building
Quanta Site, Edgewater, New Jersey

Indoor Air Sample Locations

Location ID	Sample Location Description
Q2-IA-01	Kitchen - counter top
Q2-IA-02	1st floor dinnig room - on table near wall
Q2-IA-03	2nd floor dinnig room - on table in SW room

Subslab Sample Locations

Location ID	Sample Location Description
Q2-VI-01	Storage room next to stairs
Q2-VI-02	Kitchen - north side next to water service closet

Outdoor Air Sample Locations

Location ID	Sample Location Description
Q2-OA-01	south side of building - chained to fence

ATTACHMENT A-2

Indoor and Ambient Air Sampling Log - March 2008
163 Old River Road Building
Quanta Site, Edgewater, New Jersey

Field ID	Location Description	Canister ID	Flow Controller ID	Pressure Gauge ID	Initial Canister Pressure ("Hg")	Start Date	Start Time	End Date	End Time	Final Pressure ("Hg")	Flow Controller Rate (ml/min)	Temp oF
Q2-IA-01-032508	Kitchen - counter top	1177	0654	0300	-30	3/24/2008	10:34	3/25/2008	10:31	-8	24 Hour Period	64
Q2-IA-02-032508	1st floor dinnig room - on table near wall	1487	0468	0112	-29	3/24/2008	10:31	3/25/2008	10:30	-10.5	24 Hour Period	68
Q2-IA-03-032508	2nd floor dinnig room - on table in SW room	1124	0473	0257	-29.5	3/24/2008	10:29	3/25/2008	10:29	-7	24 Hour Period	67
Q2-DUP2-032508	Kitchen - counter top	1061	0391	0528	-30	3/24/2008	10:34	3/25/2008	10:31	-12	24 Hour Period	64
Q2-OA-01-032508	South of Bldg chained to fence	1468	0669	0698	-30	3/24/2008	10:42	3/25/2008	10:49	-3.5	24 Hour Period	50

ATTACHMENT A-3

Subslab Soil Gas Sampling Log - March 2008
 163 Old River Road Building
 Quanta Site, Edgewater, New Jersey

Field ID	Location Description	Canister ID	Flow Controller ID	Pressure Gauge ID	Date	Initial PID in Probe (ppm)		Purge Start Time	Purge End Time	Purge Rate (mL/min)	PID from Purge (ppm)	Leak Check (ppm)	Sample Start Time	Initial Pressure ("Hg)	Sample Finish Time	Final Pressure (" Hg)	Temp (°F)	Comment
Q2-VI-01-032308	Storage room next to stairs	0148	0073	0549	03/24/08	0	9:51	9:58	200	0	100	10:00	-30	10:01	-3	64	None	
Q2-VI-02-032308	Kitchen - north side next to water service closet	0208	0135	0460	03/25/08	62.4	11:06	11:12	200	0	0	11:13	-30	11:20	-3.5	64	None	

Attachment B
Chain of Custody Form



Color
Analytical
Services Inc.
An Employee-Owned Company

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day - Standard

CAS Project No.

Company Name & Address (Reporting Information)		Project Name		CAS Contact		<p><i>Kate Aguilera</i></p> <p>Analysis Method and/or Analytes</p> <p>EPA 3C (Oxygen and carbon dioxide)</p>		
CH2M Hill 3011 SW Williston Rd Gainesville, FL 32608 Attn: Amy Klopper		Quanta Resources						
Project Manager: Steve Zarlinski		Project Number 363725.37.Q1.VI.JN						
Phone 352-335-5877 ext 52901		P.O. # / Billing Information CH2M HILL AIP PO Box 241329 Denver CO 80224		TO-15 and SIM TO-15				
Email Address for Result Reporting amy.klopper@ch2m.com		Sampler (Print & Sign) Ten Simms / Ten Simms						
Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Sample Type (Air/tube/Solid)	Canister ID (Bar Code # - AC, SC, etc.)	Flow Controller (Bar Code - FC #)	Sample Volume	
Q1-01				177				
Q1-02				14X				
Q2-03				112				
Q2-DUP1-Q32503	3/25/08	1031	Air	1177	0654	10L	X	
Q2-TA-02-Q32503	3/25/08	1030	Air	1487	0463	10L	X	
Q2-TA-03-Q32503	3/25/08	1029	Air	1124	0473	10L	X	
Q2-DUP1-Q32503	3/25/08	—	Air	1061	0391	10L	X	
Q2-DA-01-Q32503	3/25/08	1049	Air	1463	0669	10L	X	
Q2-VI-01-Q32408	3/24/08	1001	Air	0148	0073	1L	X	X
Q2-VI-02-Q32503	3/25/08	1120	Air	0208	0135	1L	X	X
Report Tier Levels - please select		Please select Tier I, II, III, IV or V		EDD required Yes / No		Project Requirements (MRLs, QAPP)		
Tier I - (Results/Details if not specified)		Tier III - (Data Validation Package) 10% SurchARGE		Type: _____	EDD Units: _____			
Tier II - (Results + QC)		Tier V - (client specified)						
Relinquished by: (Signature)	<i>Ten Simms</i>	Date: <i>03/25/08</i>	Time: <i>16:34</i>	Received by: (Signature)		Date: _____	Time: _____	
Relinquished by: (Signature)		Date: _____	Time: _____	Received by: (Signature)		Date: _____	Time: _____	
* Relinquished by: (Signature)		Date: _____	Time: _____	Received by: (Signature)		Date: _____	Time: _____	
Cooler / Blank								
Temperature: _____ °C								

Attachment C
Analytical Data

ATTACHMENT C-1

Subslab Soil Gas Sampling Results for O₂ and CO₂ - March 2008
163 Old River Road Building
Quanta Resources Site
Edgewater, NJ

Location ID	Field Sample ID	Sample Purpose	Analytical Method	Parameter Code	Parameter Name	Reporting Unit	Reporting Limit	Detected Result	Validation Qualifier
Q2-VI-01	Q2-VI-01-032408	REG	EPA 3C	124-38-9	CARBON DIOXIDE	%V/V	0.31		ND
Q2-VI-01	Q2-VI-01-032408	REG	EPA 3C	AROX	OXYGEN + ARGON	%V/V	0.31	21.9	
Q2-VI-02	Q2-VI-02-032408	REG	EPA 3C	124-38-9	CARBON DIOXIDE	%V/V	0.17		ND
Q2-VI-02	Q2-VI-02-032408	REG	EPA 3C	AROX	OXYGEN + ARGON	%V/V	0.17	21.9	

Notes:

%V/V = Percent by volume

ND = Not detected above laboratory reporting limits

ATTACHMENT C-2

Indoor Air Sampling Results - March 2008
 163 Old River Road Building
 Quanta Resources Site
 Edgewater, NJ

LOCATION DESCRIPTION	AREA	Kitchen Counter Top Q2-IA-01 Q2-IA-01-032508	1st Floor Dining Room On Table Near Wall Q2-IA-02 Q2-IA-02-032508	2nd Floor - Dining Room	
				On Table in SW Room Q2-IA-03 Q2-IA-03-032508	Q2-IA-03 Q2-DUP1-032508 3/25/2008 Normal Duplicate
SAMPLE PURPOSE	SAMPLE DATE	3/25/2008 Normal	3/25/2008 Normal	3/25/2008 Normal	3/25/2008 Normal
Parameter Name	Units	Analytical Method			
1,1,1-TRICHLOROETHANE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
1,1,2,2-TETRACHLOROETHANE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
1,1,2-TRICHLOROETHANE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
1,1,2-TRICHLOROTRIFLUOROETHANE	ug/m3	TO-15	0.72 J	0.69 J	0.59 J
1,1-DICHLOROETHANE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
1,1-DICHLOROETHENE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
1,2,4-TRICHLOROBENZENE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
1,2,4-TRIMETHYLBENZENE	ug/m3	TO-15	1	0.41 J	1.1
1,2-DIBROMO-3-CHLOROPROPANE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
1,2-DIBROMOETHANE (EDB)	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
1,2-DICHLOROBENZENE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
1,2-DICHLOROETHANE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
1,2-DICHLOROPROPANE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
1,2-DICHLOROTETRAFLUOROETHANE	ug/m3	TO-15	0.34 J	0.95 U	0.79 U
1,3,5-TRIMETHYLBENZENE	ug/m3	TO-15	0.38 J	0.95 U	0.38 J
1,3-BUTADIENE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
1,3-DICHLOROBENZENE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
1,4-DICHLOROBENZENE	ug/m3	TO-15	0.23 J	0.21 J	0.16 J
1,4-DIOXANE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
1-ETHYL-4-METHYL-BENZENE	ug/m3	TO-15	0.37 J	0.95 U	0.35 J
2-BUTANONE (MEK)	ug/m3	TO-15	1.3 U	1.9 U	1.6 U
2-HEXANONE	ug/m3	TO-15	0.22 J	0.6 J	0.33 J
2-PROPANOL	ug/m3	TO-15	8.6 J	1.7 J	35
4-METHYL-2-PENTANONE	ug/m3	TO-15	0.96 U	0.95 U	0.25 J
ACETIC ACID, ETHYL ESTER	ug/m3	TO-15	3.2 J	6.1	13
ACETONE	ug/m3	TO-15	9.2 U	12 U	13 U
ACETONITRILE	ug/m3	TO-15	0.57 J	0.47 J	0.31 J
ACROLEIN	ug/m3	TO-15	0.6 U	1 U	0.95
ACRYLONITRILE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
ALLYL CHLORIDE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
ALPHA-PINENE	ug/m3	TO-15	0.98	0.95 U	0.28 J
BENZENE	ug/m3	TO-15	1	0.76	0.81
BENZENE, (CHLOROMETHYL)-	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
BROMODICHLOROMETHANE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
BROMOFORM	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
BROMOMETHANE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
CARBON DISULFIDE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
CARBON TETRACHLORIDE	ug/m3	TO-15	0.31 J	0.39 J	0.47 J
CHLOROBENZENE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
CHLORODIBROMOMETHANE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
CHLOROETHANE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
CHLOROFORM	ug/m3	TO-15	0.23 J	0.95 U	0.79 U
CHLOROMETHANE	ug/m3	TO-15	1.1	0.99	1.1
CIS-1,2-DICHLOROETHENE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
CIS-1,3-DICHLOROPROPENE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
CYCLOHEXANE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
DICHLORODIFLUOROMETHANE	ug/m3	TO-15	2.8	2.6	2.6
D-LIMONENE	ug/m3	TO-15	5.6 J	0.19 J	0.19 J
ETHANOL	ug/m3	TO-15	150	26 J	130
ETHYLBENZENE	ug/m3	TO-15	0.65 J	0.35 J	0.43 J
HEXAChLOROBUTADIENE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
ISOPROPYLBENZENE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
METHYL METHACRYLATE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
METHYL TERT-BUTYL ETHER (MTBE)	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
METHYLENE CHLORIDE	ug/m3	TO-15	0.46 J	0.41 J	0.36 J
NAPHTHALENE	ug/m3	TO-15	0.62	0.32	0.42
N-BUTYL ACETATE	ug/m3	TO-15	0.96 U	0.25 J	0.24 J
N-HEPTANE	ug/m3	TO-15	0.34 J	0.25 J	0.29 J
N-HEXANE	ug/m3	TO-15	0.56 J	0.47 J	0.44 J
N-NONANE	ug/m3	TO-15	1.3	0.37 J	2.4
N-OCTANE	ug/m3	TO-15	0.34 J	0.3 J	0.41 J
N-PROPYLBENZENE	ug/m3	TO-15	0.26 J	0.95 U	0.22 J
O-XYLENE	ug/m3	TO-15	0.97	0.45 J	0.61 J
PROPYLENE	ug/m3	TO-15	3.5 J	1.3 J	2.5 J
STYRENE	ug/m3	TO-15	0.24 J	0.95 U	0.79 U
TETRACHLOROETHENE	ug/m3	TO-15	0.31 J	0.3 J	0.28 J
TETRAHYDROFURAN	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
TOLUENE	ug/m3	TO-15	2.6	2.6	2.6
TRANS-1,2-DICHLOROETHENE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
TRANS-1,3-DICHLOROPROPENE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
TRICHLOROETHENE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
TRICHLOROFLUOROMETHANE	ug/m3	TO-15	1.7	1.3	1.4
VINYL ACETATE	ug/m3	TO-15	9.6 U	9.5 U	7.9 U
VINYL CHLORIDE	ug/m3	TO-15	0.96 U	0.95 U	0.79 U
XYLENES, M & P	ug/m3	TO-15	2.5	1.3 J	1.6

Notes:

U = Below laboratory reporting limits

J = Data below calibration curve for that constituent, quantity estimated.

ATTACHMENT C-3

Subslab Sampling Result - March 2008
 163 Old River Road Building
 Quanta Resources Site
 Edgewater, NJ

Parameter Name	Units	Analytical Method	AREA	Storage Room	Kitchen - North Side
			LOCATION DESCRIPTION	Next to Stairs	Next to water service closet
			LOCATION ID	Q2-VI-01	Q2-VI-02
			FIELD SAMPLE ID	Q2-VI-01-032408	Q2-VI-02-032508
SAMPLE DATE	Normal	3/24/2008	SAMPLE PURPOSE	3/25/2008	Normal
1,1,1-TRICHLOROETHANE	ug/m3	TO-15	1.9 U	5.9 U	
1,1,2,2-TETRACHLOROETHANE	ug/m3	TO-15	1.9 U	5.9 U	
1,1,2-TRICHLOROETHANE	ug/m3	TO-15	1.9 U	5.9 U	
1,1,2-TRICHLOROTRIFLUOROETHANE	ug/m3	TO-15	0.64 J	5.9 U	
1,1-DICHLOROETHANE	ug/m3	TO-15	1.9 U	5.9 U	
1,1-DICHLOROETHENE	ug/m3	TO-15	1.9 U	5.9 U	
1,2,4-TRICHLOROBENZENE	ug/m3	TO-15	1.9 U	5.9 U	
1,2,4-TRIMETHYLBENZENE	ug/m3	TO-15	25	2100	
1,2-DIBROMO-3-CHLOROPROPANE	ug/m3	TO-15	1.9 U	5.9 U	
1,2-DIBROMOETHANE (EDB)	ug/m3	TO-15	1.9 U	5.9 U	
1,2-DICHLOROBENZENE	ug/m3	TO-15	1.9 U	5.9 U	
1,2-DICHLOROETHANE	ug/m3	TO-15	1.9 U	5.9 U	
1,2-DICHLOROPROPANE	ug/m3	TO-15	1.9 U	5.9 U	
1,2-DICHLOROTETRAFLUOROETHANE	ug/m3	TO-15	1.9 U	5.9 U	
1,3,5-TRIMETHYLBENZENE	ug/m3	TO-15	9	690	
1,3-BUTADIENE	ug/m3	TO-15	1.9 U	5.9 U	
1,3-DICHLOROBENZENE	ug/m3	TO-15	1.9 U	5.9 U	
1,4-DICHLOROBENZENE	ug/m3	TO-15	1.9 U	5.9 U	
1,4-DIOXANE	ug/m3	TO-15	1.9 U	5.9 U	
1-ETHYL-4-METHYL-BENZENE	ug/m3	TO-15	8.1	610	
2-BUTANONE (MEK)	ug/m3	TO-15	5.3	16	
2-HEXANONE	ug/m3	TO-15	1.2 J	5.9 U	
2-PROPANOL	ug/m3	TO-15	4.4	9.6 J	
4-METHYL-2-PENTANONE	ug/m3	TO-15	190	140	
ACETIC ACID, ETHYL ESTER	ug/m3	TO-15	3.3	4.1 J	
ACETONE	ug/m3	TO-15	41 U	68 U	
ACETONITRILE	ug/m3	TO-15	0.87 J	5.9 U	
ACROLEIN	ug/m3	TO-15	2.3	1.8 U	
ACRYLONITRILE	ug/m3	TO-15	1.9 U	5.9 U	
ALLYL CHLORIDE	ug/m3	TO-15	1.9 U	5.9 U	
ALPHA-PINENE	ug/m3	TO-15	1.9 U	7.7	
BENZENE	ug/m3	TO-15	1.9 U	5.9 U	
BENZENE, (CHLOROMETHYL)-	ug/m3	TO-15	1.9 U	5.9 U	
BROMODICHLOROMETHANE	ug/m3	TO-15	1.9 U	5.9 U	
BROMOFORM	ug/m3	TO-15	1.9 U	5.9 U	
BROMOMETHANE	ug/m3	TO-15	1.9 U	5.9 U	
CARBON DISULFIDE	ug/m3	TO-15	1.7 J	5.9 U	
CARBON TETRACHLORIDE	ug/m3	TO-15	0.42 J	5.9 U	
CHLOROBENZENE	ug/m3	TO-15	1.9 U	5.9 U	
CHLORODIBROMOMETHANE	ug/m3	TO-15	1.9 U	5.9 U	
CHLOROETHANE	ug/m3	TO-15	1.9 U	5.9 U	
CHLOROFORM	ug/m3	TO-15	8.7	1.4 J	
CHLOROMETHANE	ug/m3	TO-15	0.5 J	5.9 U	
CIS-1,2-DICHLOROETHENE	ug/m3	TO-15	1.9 U	5.9 U	
CIS-1,3-DICHLOROPROPENE	ug/m3	TO-15	1.9 U	5.9 U	
CYCLOHEXANE	ug/m3	TO-15	1.9 U	5.9 U	
DICHLORODIFLUOROMETHANE	ug/m3	TO-15	2.7	2.5 J	
D-LIMONENE	ug/m3	TO-15	2.1	12	
ETHANOL	ug/m3	TO-15	30 J	56 J	
ETHYLBENZENE	ug/m3	TO-15	50	1500	
HEXAChLOROBUTADIENE	ug/m3	TO-15	1.9 U	5.9 U	
ISOPROPYLBENZENE	ug/m3	TO-15	1.8 J	130	
METHYL METHACRYLATE	ug/m3	TO-15	1.9 U	5.9 U	
METHYL TERT-BUTYL ETHER (MTBE)	ug/m3	TO-15	1.9 U	5.9 U	
METHYLENE CHLORIDE	ug/m3	TO-15	1.9 U	5.9 U	
NAPHTHALENE	ug/m3	TO-15	0.46 J	3.2 J	
N-BUTYL ACETATE	ug/m3	TO-15	1.9 U	5.9 U	
N-HEPTANE	ug/m3	TO-15	3.2	4.4 J	
N-HEXANE	ug/m3	TO-15	1.9 U	5.9 U	
N-NONANE	ug/m3	TO-15	5	15	
N-OCTANE	ug/m3	TO-15	1.5 J	1.6 J	
N-PROPYLBENZENE	ug/m3	TO-15	4.6	330	
O-XYLENE	ug/m3	TO-15	66	3500	
PROPYLENE	ug/m3	TO-15	2.5 J	5.9 U	
STYRENE	ug/m3	TO-15	1.9 U	5.9 U	
TETRACHLOROETHENE	ug/m3	TO-15	2.1	4.2 J	
TETRAHYDROFURAN	ug/m3	TO-15	1.9 U	7.9	
TOLUENE	ug/m3	TO-15	2	9.4	
TRANS-1,2-DICHLOROETHENE	ug/m3	TO-15	1.9 U	5.9 U	
TRANS-1,3-DICHLOROPROPENE	ug/m3	TO-15	1.9 U	5.9 U	
TRICHLOROETHENE	ug/m3	TO-15	1.9 U	5.9 U	
TRICHLOROFLUOROMETHANE	ug/m3	TO-15	1.5 J	1.2 J	
VINYL ACETATE	ug/m3	TO-15	9.8 J	59 U	
VINYL CHLORIDE	ug/m3	TO-15	1.9 U	5.9 U	
XYLENES, M & P	ug/m3	TO-15	190	8100	

Notes:

U = Below laboratory reporting limits

J = Data below calibration curve for that constituent, quantity estimated.

ATTACHMENT C-4

Outdoor Air Sampling Results - March 2008
 163 Old River Road Building
 Quanta Resources Site
 Edgewater, NJ

LOCATION DESCRIPTION	AREA	South Side of Building	
	LOCATION ID	Chained to Fence	
	FIELD SAMPLE ID	Q2-OA-01	
	SAMPLE DATE	Q2-OA-01-032508	
	SAMPLE PURPOSE	3/25/2008	
		Normal	
Parameter Name	Units	Analytical Method	
1,1,1-TRICHLOROETHANE	ug/m3	TO-15	0.61 U
1,1,2,2-TETRACHLOROETHANE	ug/m3	TO-15	0.61 U
1,1,2-TRICHLOROETHANE	ug/m3	TO-15	0.61 U
1,1,2-TRICHLOROTRIFLUOROETHANE	ug/m3	TO-15	0.66
1,1-DICHLOROETHANE	ug/m3	TO-15	0.61 U
1,1-DICHLOROETHENE	ug/m3	TO-15	0.61 U
1,2,4-TRICHLOROBENZENE	ug/m3	TO-15	0.61 U
1,2,4-TRIMETHYLBENZENE	ug/m3	TO-15	0.37 J
1,2-DIBROMO-3-CHLOROPROPANE	ug/m3	TO-15	0.61 U
1,2-DIBROMOETHANE (EDB)	ug/m3	TO-15	0.61 U
1,2-DICHLOROBENZENE	ug/m3	TO-15	0.61 U
1,2-DICHLOROETHANE	ug/m3	TO-15	0.61 U
1,2-DICHLOROPROPANE	ug/m3	TO-15	0.61 U
1,2-DICHLOROTETRAFLUOROETHANE	ug/m3	TO-15	0.61 U
1,3,5-TRIMETHYLBENZENE	ug/m3	TO-15	0.61 U
1,3-BUTADIENE	ug/m3	TO-15	0.61 U
1,3-DICHLOROBENZENE	ug/m3	TO-15	0.61 U
1,4-DICHLOROBENZENE	ug/m3	TO-15	0.16 J
1,4-DIOXANE	ug/m3	TO-15	0.61 U
1-ETHYL-4-METHYL-BENZENE	ug/m3	TO-15	0.13 J
2-BUTANONE (MEK)	ug/m3	TO-15	1.2 U
2-HEXANONE	ug/m3	TO-15	0.23 J
2-PROPANOL	ug/m3	TO-15	1.1 J
4-METHYL-2-PENTANONE	ug/m3	TO-15	0.61 U
ACETIC ACID, ETHYL ESTER	ug/m3	TO-15	1.7
ACETONE	ug/m3	TO-15	7.7 U
ACETONITRILE	ug/m3	TO-15	0.24 J
ACROLEIN	ug/m3	TO-15	0.66 U
ACRYLONITRILE	ug/m3	TO-15	0.61 U
ALLYL CHLORIDE	ug/m3	TO-15	0.61 U
ALPHA-PINENE	ug/m3	TO-15	0.61 U
BENZENE	ug/m3	TO-15	0.81
BENZENE, (CHLOROMETHYL)-	ug/m3	TO-15	0.61 U
BROMODICHLOROMETHANE	ug/m3	TO-15	0.61 U
BROMOFORM	ug/m3	TO-15	0.61 U
BROMOMETHANE	ug/m3	TO-15	0.61 U
CARBON DISULFIDE	ug/m3	TO-15	0.61 U
CARBON TETRACHLORIDE	ug/m3	TO-15	0.47 J
CHLOROBENZENE	ug/m3	TO-15	0.61 U
CHLORODIBROMOMETHANE	ug/m3	TO-15	0.61 U
CHLOROETHANE	ug/m3	TO-15	0.61 U
CHLOROFORM	ug/m3	TO-15	0.61 U
CHLOROMETHANE	ug/m3	TO-15	1.1
CIS-1,2-DICHLOROETHENE	ug/m3	TO-15	0.61 U
CIS-1,3-DICHLOROPROPENE	ug/m3	TO-15	0.61 U
CYCLOHEXANE	ug/m3	TO-15	0.61 U
DICHLORODIFLUOROMETHANE	ug/m3	TO-15	2.7
D-LIMONENE	ug/m3	TO-15	0.61 U
ETHANOL	ug/m3	TO-15	12 J
ETHYLBENZENE	ug/m3	TO-15	0.36 J
HEXACHLOROBUTADIENE	ug/m3	TO-15	0.61 U
ISOPROPYLBENZENE	ug/m3	TO-15	0.61 U
METHYL METHACRYLATE	ug/m3	TO-15	0.61 U
METHYL TERT-BUTYL ETHER (MTBE)	ug/m3	TO-15	0.61 U
METHYLENE CHLORIDE	ug/m3	TO-15	0.35 J
NAPHTHALENE	ug/m3	TO-15	0.14
N-BUTYL ACETATE	ug/m3	TO-15	0.14 J
N-HEPTANE	ug/m3	TO-15	0.36 J
N-HEXANE	ug/m3	TO-15	0.74
N-NONANE	ug/m3	TO-15	0.48 J
N-OCTANE	ug/m3	TO-15	0.26 J
N-PROPYLBENZENE	ug/m3	TO-15	0.61 U
O-XYLENE	ug/m3	TO-15	0.41 J
PROPYLENE	ug/m3	TO-15	1.1 J
STYRENE	ug/m3	TO-15	0.61 U
TETRACHLOROETHENE	ug/m3	TO-15	0.28 J
TETRAHYDROFURAN	ug/m3	TO-15	0.61 U
TOLUENE	ug/m3	TO-15	2.4
TRANS-1,2-DICHLOROETHENE	ug/m3	TO-15	0.61 U
TRANS-1,3-DICHLOROPROPENE	ug/m3	TO-15	0.61 U
TRICHLOROETHENE	ug/m3	TO-15	0.55 J
TRICHLOROFLUOROMETHANE	ug/m3	TO-15	1.4
VINYL ACETATE	ug/m3	TO-15	6.1 U
VINYL CHLORIDE	ug/m3	TO-15	0.61 U
XYLENES, M & P	ug/m3	TO-15	1.2

Notes:

U = Below laboratory reporting limits

J = Data below calibration curve for that constituent, quantity estimated.

Attachment D
Data Quality Evaluation Report

Honeywell Quanta

163 Old River Road Air Sampling

Data Quality Evaluation Report

Introduction

The objective of this Data Quality Evaluation (DQE) report is to assess the data quality of analytical results for the air samples collected at the Honeywell Quanta site in March 2008. Individual method requirements and guidelines from the USEPA Contract Laboratory National Functional Guidelines for Organic Data Review, October 1999 were used in this assessment.

This report is intended as a general data quality assessment designed to summarize data issues.

Analytical Data

This DQE report covers 6 normal environmental samples and 1 field duplicate sample. These sample results were reported as one sample delivery group, P0800817. Samples were analyzed for one or more of the methods listed in **Table 1** below. The analyses were performed by Columbia Analytical Services, (CAS) located in Simi Valley, California.

TABLE 1
Analytical Parameter, Method and Laboratory

Parameter	Method	Laboratory
Volatile Organic Compounds	TO-15	CAS
Fixed Gases	EPA 3C	CAS

The assessment of data includes a review of: (1) the chain-of-custody (CoC) documentation; (2) holding-time compliance; (3) the required quality control (QC) samples at the specified frequencies; (4) flagging for method blanks; (5) laboratory control spiking samples; (6) surrogate spike recoveries for organic analyses; (7) analytical spike data; (8) calibration data, and other method-specific criteria.

Field samples were also reviewed to ascertain field compliance and data quality issues. This included a review of field duplicate samples.

The data flags used in this assessment are defined below:

- J = Analyte is present but the reported value may not be accurate or precise (estimated).

- R = The data are unusable due to deficiencies in the ability to analyze the sample and meet QC criteria.
- U = Analyte was not detected at the specified detection limit.
- UJ = Analyte was not detected and the specified detection limit may not be accurate or precise (estimated).
- X = Result was excluded. The data are associated with re-runs and dilutions and are excluded because another useable result exists. (There can only be a single valid result per parameter per sample.)

Findings

The overall summaries of the data validation findings are contained in the following sections below and summarized in Table 2.

The laboratory noted that sample detects for propylene may be biased high due to coelution with a non-target compound. All associated results were qualified as estimated, "J", due to this possible high bias.

Holding Times

All holding-time criteria were met.

Method Blanks

Method blanks were analyzed at the required frequency and were generally free of contamination. Acetone, acrolein, and methylene chloride were detected in a laboratory method blank and the associated sample data were qualified as not detected, "U", when the samples results were within 10X (acetone or methylene chloride) or 5X (acrolein) of the amount detected in the laboratory method blank. Other analytes were detected at low levels in the method blanks but caused no data qualification.

Field Duplicates

One field duplicate was collected and analyzed as required for this event. This field duplicate set had three compounds out of RPD criteria. Both native and field dulicate results were qualified as estimated, "J".

Surrogates

All surrogates were recovered within laboratory established QC limits.

Laboratory Control Samples

Laboratory control samples were analyzed as required and were recovered within laboratory established QC limits.

Calibration

Initial and continuing calibrations were analyzed as required and were generally within laboratory established QC limits. Ethanol had a percent deviation above acceptance criteria in the initial calibration verification standard. All associated sample detects for this compound were qualified as estimated, "J". Non-detects were not qualified.

Chain of Custody

Each sample was documented in a completed CoC. All sample container criteria were met.

Overall Assessment

The goal of this assessment is to demonstrate that a sufficient number of representative samples were collected and the resulting analytical data can be used to support the decision-making process. The procedures for assessing the precision, accuracy, representativeness, completeness, and comparability parameters (PARCC) were based on the USEPA Contract Laboratory National Functional Guidelines for Organic Data Review, October 1999. The following summary highlights the PARCC findings for the above-defined events:

1. The completeness objectives were met for all method/analyte combinations.
2. Some data are qualified because of low-level blank contamination.
3. A few results were qualified as estimated concentrations.
4. The precision and accuracy of the data, as measured by field and laboratory QC indicators, suggest that the project goals have been met.

TABLE 2
Validation Flags

Method	Native ID	Analyte	Final Result	Units	Final Validation Flag	Validation Reason
TO-15	Q2-DUP1-032508	2-Propanol	2.5	ug/m3	J	FD
TO-15	Q2-DUP1-032508	Acetic Acid, Ethyl Ester	10	ug/m3	J	FD
TO-15	Q2-DUP1-032508	Acetone	12	ug/m3	U	LBL
TO-15	Q2-DUP1-032508	Acrolein	1.1	ug/m3	U	LBL
TO-15	Q2-DUP1-032508	D-LIMONENE	0.53	ug/m3	J	FD
TO-15	Q2-DUP1-032508	MEK (2-Butanone)	2.1	ug/m3	U	LBL
TO-15	Q2-DUP1-032508	PROPYLENE	3.9	ug/m3	J	COELUT
TO-15	Q2-IA-01-032508	2-Propanol	8.6	ug/m3	J	FD
TO-15	Q2-IA-01-032508	Acetic Acid, Ethyl Ester	3.2	ug/m3	J	FD
TO-15	Q2-IA-01-032508	Acetone	9.2	ug/m3	U	LBL
TO-15	Q2-IA-01-032508	Acrolein	0.6	ug/m3	U	LBL
TO-15	Q2-IA-01-032508	D-LIMONENE	5.6	ug/m3	J	FD

TABLE 2
Validation Flags

Method	Native ID	Analyte	Final Result	Units	Final Validation Flag	Validation Reason
TO-15	Q2-IA-01-032508	MEK (2-Butanone)	1.3	ug/m3	U	LBL
TO-15	Q2-IA-01-032508	PROPYLENE	3.5	ug/m3	J	COELUT
TO-15	Q2-IA-02-032508	Acetone	12	ug/m3	U	LBL
TO-15	Q2-IA-02-032508	Acrolein	1	ug/m3	U	LBL
TO-15	Q2-IA-02-032508	Ethanol	26	ug/m3	J	ICVSH
TO-15	Q2-IA-02-032508	MEK (2-Butanone)	1.9	ug/m3	U	LBL
TO-15	Q2-IA-02-032508	PROPYLENE	1.3	ug/m3	J	COELUT
TO-15	Q2-IA-03-032508	Acetone	13	ug/m3	U	LBL
TO-15	Q2-IA-03-032508	MEK (2-Butanone)	1.6	ug/m3	U	LBL
TO-15	Q2-IA-03-032508	PROPYLENE	2.5	ug/m3	J	COELUT
TO-15	Q2-OA-01-032508	Acetone	7.7	ug/m3	U	LBL
TO-15	Q2-OA-01-032508	Acrolein	0.66	ug/m3	U	LBL
TO-15	Q2-OA-01-032508	Ethanol	12	ug/m3	J	ICVSH
TO-15	Q2-OA-01-032508	MEK (2-Butanone)	1.2	ug/m3	U	LBL
TO-15	Q2-OA-01-032508	PROPYLENE	1.1	ug/m3	J	COELUT
TO-15	Q2-VI-01-032408	Acetone	41	ug/m3	U	LBL
TO-15	Q2-VI-01-032408	Ethanol	30	ug/m3	J	ICVSH
TO-15	Q2-VI-01-032408	PROPYLENE	2.5	ug/m3	J	COELUT
TO-15	Q2-VI-02-032508	Acetone	68	ug/m3	U	LBL
TO-15	Q2-VI-02-032508	Acrolein	1.8	ug/m3	U	LBL
TO-15	Q2-VI-02-032508	Ethanol	56	ug/m3	J	ICVSH

LBL - Analyte detected in the associated laboratory method blank less than the reporting limit.

FD - Field duplicate precision exceeded.

ICVSH - Initial calibration verification standard exceeded acceptance criteria.

COELUT - Sample result may have a high bias due to coelution with non-target compound.

Attachment E
Analytical Data Comparison to Screening Levels

Attachment E-1

Indoor Air Sampling Results Compared to NJDEP RALS and HDNLs - March 2008

163 Old River Road Building

Quanta Resources Site

Edgewater, NJ

Location ID	Field Sample ID	Sample Purpose	Analytical Method	Parameter Code	Parameter Name	Reporting Unit	Reporting Limit	Detected Result	Validation Qualifier	NJDEP RAL ug/m3	NJDEP RAL Exceed?	NJDEP HDNLs ug/m3	NJDEP HDNL Exceed?
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	71-55-6	1,1,1-TRICHLOROETHANE	ug/m3	0.96		ND	2000	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	79-34-5	1,1,2,2-TETRACHLOROETHANE	ug/m3	0.96		ND	3	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	79-00-5	1,1,2-TRICHLOROETHANE	ug/m3	0.96		ND	10	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	76-13-1	1,1,2-TRICHLOROTRIFLUOROETHANE	ug/m3	0.96	0.72	J	62000	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	75-34-3	1,1-DICHLOROETHANE	ug/m3	0.96		ND	1020	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	75-35-4	1,1-DICHLOROETHENE	ug/m3	0.96		ND	440	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	120-82-1	1,2,4-TRICHLOROBENZENE	ug/m3	0.96		ND	72	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	95-63-6	1,2,4-TRIMETHYLBENZENE	ug/m3	0.96	1		NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	96-12-4	1,2-DIBROMO-3-CHLOROPROPANE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	106-93-4	1,2-DIBROMOETHANE (EDB)	ug/m3	0.96		ND	0.3	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	95-50-1	1,2-DICHLOROBENZENE	ug/m3	0.96		ND	300	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	107-06-2	1,2-DICHLOROETHANE	ug/m3	0.96		ND	7	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	78-87-5	1,2-DICHLOROPROPANE	ug/m3	0.96		ND	9	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	76-14-2	1,2-DICHLOROTETRAFLUOROETHANE	ug/m3	0.96	0.34	J	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	108-67-8	1,3,5-TRIMETHYLBENZENE	ug/m3	0.96	0.38	J	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	106-99-0	1,3-BUTADIENE	ug/m3	0.96		ND	6	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	541-73-1	1,3-DICHLOROBENZENE	ug/m3	0.96		ND	22	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	106-46-7	1,4-DICHLOROBENZENE	ug/m3	0.96	0.23	J	30	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	123-91-1	1,4-DIOXANE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	622-96-8	1-ETHYL-4-METHYL-BENZENE	ug/m3	0.96	0.37	J	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	78-93-3	2-BUTANONE (MEK)	ug/m3	1.3		ND	10200	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	591-78-6	2-HEXANONE	ug/m3	0.96	0.22	J	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	67-63-0	2-PROPANOL	ug/m3	1.9	8.6	J	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	108-10-1	4-METHYL-2-PENTANONE	ug/m3	0.96		ND	6200	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	141-78-6	ACETIC ACID, ETHYL ESTER	ug/m3	0.96	3.2	J	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	67-64-1	ACETONE	ug/m3	9.2		ND	6600	No	31000	No
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	75-05-8	ACETONITRILE	ug/m3	0.96	0.57	J	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	107-02-8	ACROLEIN	ug/m3	0.6		ND	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	107-13-1	ACRYLONITRILE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	107-05-1	ALLYL CHLORIDE	ug/m3	0.96		ND	30	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	80-56-8	ALPHA-PINENE	ug/m3	0.96	0.98		NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	71-43-2	BENZENE	ug/m3	0.19	1		14	No	14	No
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	100-44-7	BENZENE, (CHLOROMETHYL)	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	75-27-4	BROMODICHLOROMETHANE	ug/m3	0.96		ND	10	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	75-25-2	BROMOFORM	ug/m3	0.96		ND	200	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	74-83-9	BROMOMETHANE	ug/m3	0.96		ND	10	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	75-15-0	CARBON DISULFIDE	ug/m3	0.96		ND	1460	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	56-23-5	CARBON TETRACHLORIDE	ug/m3	0.96	0.31	J	10	No	100	No
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	108-90-7	CHLOROBENZENE	ug/m3	0.96		ND	102	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	124-48-1	CHLORODIBROMOMETHANE	ug/m3	0.96		ND	7	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	75-00-3	CHLOROETHANE	ug/m3	0.96		ND	200	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	87-66-3	CHLOROFORM	ug/m3	0.96	0.23	J	8	No	80	No
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	74-87-3	CHLOROMETHANE	ug/m3	0.96	1.1		190	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	156-59-2	CIS-1,2-DICHLOROETHENE	ug/m3	0.96		ND	72	No	400	No
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	10061-01-5	CIS-1,3-DICHLOROPROPENE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	110-82-7	CYCLOHEXANE	ug/m3	0.96		ND	12400	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	75-71-8	DICHLORODIFLUOROMETHANE	ug/m3	0.96	2.8		360	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	5989-27-5	D-LIMONENE	ug/m3	0.96	5.6	J	NA	NA	NA	NA

Attachment E-1

Indoor Air Sampling Results Compared to NJDEP RALS and HDNLs - March 2008

163 Old River Road Building

Quanta Resources Site

Edgewater, NJ

Location ID	Field Sample ID	Sample Purpose	Analytical Method	Parameter Code	Parameter Name	Reporting Unit	Reporting Limit	Detected Result	Validation Qualifier	NJDEP RAL ug/m3	NJDEP RAL Exceed?	NJDEP HDNLs ug/m3	NJDEP HDNL Exceed?
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	64-17-5	ETHANOL	ug/m3	9.6	150		NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	100-41-4	ETHYLBENZENE	ug/m3	0.96	0.65	J	2200	No	4300	No
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	87-68-3	HEXACHLOROBUTADIENE	ug/m3	0.96		ND	8	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	98-82-8	ISOPROPYLBENZENE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	80-62-6	METHYL METHACRYLATE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	1634-04-4	METHYL TERT-BUTYL ETHER (MTBE)	ug/m3	0.96		ND	200	No	2000	No
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	75-09-2	METHYLENE CHLORIDE	ug/m3	0.96	0.46	J	400	No	1000	No
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	91-20-3	NAPHTHALENE	ug/m3	0.19	0.62		NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	123-86-4	N-BUTYL ACETATE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	142-82-5	N-HEPTANE	ug/m3	0.96	0.34	J	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	110-54-3	N-HEXANE	ug/m3	0.96	0.56	J	1460	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	111-84-2	N-NONANE	ug/m3	0.96	1.3		NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	111-65-9	N-OCTANE	ug/m3	0.96	0.34	J	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	103-65-1	N-PROPYLBENZENE	ug/m3	0.96	0.26	J	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	95-47-6	O-XYLENE	ug/m3	0.96	0.97		NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	115-07-1	PROPYLENE	ug/m3	0.96	3.5	J	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	100-42-5	STYRENE	ug/m3	0.96	0.24	J	2000	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	127-18-4	TETRACHLOROETHENE	ug/m3	0.96	0.31	J	30	No	300	No
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	109-99-9	TETRAHYDROFURAN	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	108-88-3	TOLUENE	ug/m3	0.96	2.6		10000	No	5100	No
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	156-60-5	TRANS-1,2-DICHLOROETHENE	ug/m3	0.96		ND	146	No	400	No
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	10061-02-6	TRANS-1,3-DICHLOROPROPENE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	-REG	TO-15	79-01-6	TRICHLOROETHENE	ug/m3	0.96		ND	20	No	20	No
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	75-69-4	TRICHLOROFLUOROMETHANE	ug/m3	0.96	1.7		1460	No	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	108-05-4	VINYL ACETATE	ug/m3	9.6		ND	NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	75-01-4	VINYL CHLORIDE	ug/m3	0.96		ND	7	No	70	No
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	Xylenes1314	XYLEMES, M & P	ug/m3	1.9	2.5		NA	NA	NA	NA
Q2-IA-01	Q2-IA-01-032508	REG	TO-15	1330-20-7	XYLEMES, TOTAL - sum of isomers	ug/m3	1.9	3.47		220	No	4300	No
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	71-55-6	1,1,1-TRICHLOROETHANE	ug/m3	0.96		ND	2000	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	79-34-5	1,1,2,2-TETRACHLOROETHANE	ug/m3	0.96		ND	3	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	79-00-5	1,1,2-TRICHLOROETHANE	ug/m3	0.96		ND	10	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	76-13-1	1,1,2-TRICHLOROTRIFLUOROETHANE	ug/m3	0.96	0.61	J	62000	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	75-34-3	1,1-DICHLOROETHANE	ug/m3	0.96		ND	1020	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	75-35-4	1,1-DICHLOROETHENE	ug/m3	0.96		ND	440	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	120-82-1	1,2,4-TRICHLOROBENZENE	ug/m3	0.96		ND	72	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	95-63-6	1,2,4-TRIMETHYLBENZENE	ug/m3	0.96	0.91	J	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	96-12-4	1,2-DIBROMO-3-CHLOROPROPANE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	106-93-4	1,2-DIBROMOETHANE (EDB)	ug/m3	0.96		ND	0.3	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	95-50-1	1,2-DICHLOROBENZENE	ug/m3	0.96		ND	300	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	107-06-2	1,2-DICHLOROETHANE	ug/m3	0.96		ND	7	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	78-87-5	1,2-DICHLOROPROPANE	ug/m3	0.96		ND	9	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	76-14-2	1,2-DICHLOROTETRAFLUOROETHANE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	108-67-8	1,3,5-TRIMETHYLBENZENE	ug/m3	0.96	0.3	J	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	106-99-0	1,3-BUTADIENE	ug/m3	0.96		ND	6	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	541-73-1	1,3-DICHLOROBENZENE	ug/m3	0.96		ND	22	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	106-46-7	1,4-DICHLOROBENZENE	ug/m3	0.96		ND	30	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	123-91-1	1,4-DIOXANE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	622-96-8	1-ETHYL-4-METHYL-BENZENE	ug/m3	0.96	0.31	J	NA	NA	NA	NA

Attachment E-1

Indoor Air Sampling Results Compared to NJDEP RALS and HDNLs - March 2008

163 Old River Road Building

Quanta Resources Site

Edgewater, NJ

Location ID	Field Sample ID	Sample Purpose	Analytical Method	Parameter Code	Parameter Name	Reporting Unit	Reporting Limit	Detected Result	Validation Qualifier	NJDEP RAL ug/m3	NJDEP RAL Exceed?	NJDEP HDNLs ug/m3	NJDEP HDNL Exceed?
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	78-93-3	2-BUTANONE (MEK)	ug/m3	2.1		ND	10200	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	591-78-6	2-HEXANONE	ug/m3	0.96	0.5	J	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	67-63-0	2-PROPANOL	ug/m3	1.9	2.5	J	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	108-10-1	4-METHYL-2-PENTANONE	ug/m3	0.96	0.22	J	6200	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	141-78-6	ACETIC ACID, ETHYL ESTER	ug/m3	0.96	10	J	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	67-64-1	ACETONE	ug/m3	12		ND	6600	No	31000	No
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	75-05-8	ACETONITRILE	ug/m3	0.96	0.41	J	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	107-02-8	ACROLEIN	ug/m3	1.1		ND	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	107-13-1	ACRYLONITRILE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	107-05-1	ALLYL CHLORIDE	ug/m3	0.96		ND	30	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	80-56-8	ALPHA-PINENE	ug/m3	0.96	0.59	J	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	71-43-2	BENZENE	ug/m3	0.19	0.85		14	No	14	No
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	100-44-7	BENZENE, (CHLOROMETHYL)-	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	75-27-4	BROMODICHLOROMETHANE	ug/m3	0.96		ND	10	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	75-25-2	BROMOFORM	ug/m3	0.96		ND	200	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	74-83-9	BROMOMETHANE	ug/m3	0.96		ND	10	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	75-15-0	CARBON DISULFIDE	ug/m3	0.96		ND	1460	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	56-23-5	CARBON TETRACHLORIDE	ug/m3	0.96	0.44	J	10	No	100	No
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	108-90-7	CHLOROBENZENE	ug/m3	0.96		ND	102	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	124-48-1	CHLORODIBROMOMETHANE	ug/m3	0.96		ND	7	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	75-00-3	CHLOROETHANE	ug/m3	0.96		ND	200	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	67-66-3	CHLOROFORM	ug/m3	0.96		ND	8	No	80	No
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	74-87-3	CHLOROMETHANE	ug/m3	0.96	1.1		190	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	156-59-2	CIS-1,2-DICHLOROETHENE	ug/m3	0.96		ND	72	No	400	No
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	10061-01-5	CIS-1,3-DICHLOROPROPENE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	110-82-7	CYCLOXANE	ug/m3	0.96		ND	12400	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	75-71-8	DICHLORODIFLUOROMETHANE	ug/m3	0.96	2.7		360	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	5989-27-5	D-LIMONENE	ug/m3	0.96	0.53	J	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	64-17-5	ETHANOL	ug/m3	9.6	170		NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	100-41-4	ETHYLBENZENE	ug/m3	0.96	0.57	J	2200	No	4300	No
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	87-68-3	HEXAChLOROBUTADIENE	ug/m3	0.96		ND	8	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	98-82-8	ISOPROPYL BENZENE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	80-62-6	METHYL METHACRYLATE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	1634-04-4	METHYL TERT-BUTYL ETHER (MTBE)	ug/m3	0.96		ND	200	No	2000	No
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	75-09-2	METHYLENE CHLORIDE	ug/m3	0.96	0.37	J	400	No	1000	No
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	91-20-3	NAPHTHALENE	ug/m3	0.19	0.38		NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	123-66-4	N-BUTYL ACETATE	ug/m3	0.96	0.25	J	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	142-82-5	N-HEPTANE	ug/m3	0.96	0.31	J	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	110-54-3	N-HEXANE	ug/m3	0.96	0.54	J	1460	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	111-84-2	N-NONANE	ug/m3	0.96	1.2		NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	111-65-9	N-OCTANE	ug/m3	0.96	0.36	J	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	103-65-1	N-PROPYLBENZENE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	95-47-6	O-XYLENE	ug/m3	0.96	0.86	J	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	115-07-1	PROPYLENE	ug/m3	0.96	3.9	J	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	100-42-5	STYRENE	ug/m3	0.96		ND	2000	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	127-18-4	TETRAChLOROETHENE	ug/m3	0.96	0.27	J	30	No	300	No
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	109-99-9	TETRAHYDROFURAN	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	108-88-3	TOLUENE	ug/m3	0.96	2.7		10000	No	5100	No

Attachment E-1

Indoor Air Sampling Results Compared to NJDEP RALS and HDNLs - March 2008
 163 Old River Road Building
 Quanta Resources Site
 Edgewater, NJ

Location ID	Field Sample ID	Sample Purpose	Analytical Method	Parameter Code	Parameter Name	Reporting Unit	Reporting Limit	Detected Result	Validation Qualifier	NJDEP RAL ug/m3	NJDEP RAL Exceed?	NJDEP HDNLs ug/m3	NJDEP HDNL Exceed?
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	156-60-5	TRANS-1,2-DICHLOROETHENE	ug/m3	0.96		ND	146	No	400	No
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	10061-02-6	TRANS-1,3-DICHLOROPROPENE	ug/m3	0.96		ND	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	79-01-6	TRICHLOROETHENE	ug/m3	0.96		ND	20	No	20	No
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	75-69-4	TRICHLOROFLUOROMETHANE	ug/m3	0.96	1.6		1460	No	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	108-05-4	VINYL ACETATE	ug/m3	9.6		ND	NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	75-01-4	VINYL CHLORIDE	ug/m3	0.96		ND	7	No	70	No
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	XYLENES 1314	XYLEMES, M & P	ug/m3	1.9	2.3		NA	NA	NA	NA
Q2-IA-01	Q2-DUP1-032508	FD	TO-15	1330-20-7	XYLEMES, TOTAL - sum of isomers	ug/m3	1.9	3.16	J	220	No	4300	No
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	71-55-6	1,1,1-TRICHLOROETHANE	ug/m3	0.95		ND	2000	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	79-34-5	1,1,2,2-TETRACHLOROETHANE	ug/m3	0.95		ND	3	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	79-00-5	1,1,2-TRICHLOROETHANE	ug/m3	0.95		ND	10	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	76-13-1	1,1,2-TRICHLOROTRIFLUOROETHANE	ug/m3	0.95	0.69	J	62000	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	75-34-3	1,1-DICHLOROETHANE	ug/m3	0.95		ND	1020	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	75-35-4	1,1-DICHLOROETHENE	ug/m3	0.95		ND	440	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	120-82-1	1,2,4-TRICHLOROBENZENE	ug/m3	0.95		ND	72	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	95-63-6	1,2,4-TRIMETHYLBENZENE	ug/m3	0.95	0.41	J	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	96-12-8	1,2-DIBROMO-3-CHLOROPROpane	ug/m3	0.95		ND	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	108-93-4	1,2-DIBROMOETHANE (EDB)	ug/m3	0.95		ND	0.3	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	95-50-1	1,2-DICHLOROBENZENE	ug/m3	0.95		ND	300	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	107-06-2	1,2-DICHLOROETHANE	ug/m3	0.95		ND	7	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	78-87-5	1,2-DICHLOROPROpane	ug/m3	0.95		ND	9	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	76-14-2	1,2-DICHLOROTETRAFLUOROETHANE	ug/m3	0.95		ND	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	108-67-8	1,3,5-TRIMETHYLBENZENE	ug/m3	0.95		ND	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	106-99-0	1,3-BUTADIENE	ug/m3	0.95		ND	6	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	541-73-1	1,3-DICHLOROBENZENE	ug/m3	0.95		ND	22	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	106-46-7	1,4-DICHLOROBENZENE	ug/m3	0.95	0.21	J	30	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	123-91-1	1,4-DIOXANE	ug/m3	0.95		ND	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	622-96-8	1-ETHYL-4-METHYL-BENZENE	ug/m3	0.95		ND	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	78-93-3	2-BUTANONE (MEK)	ug/m3	1.9		ND	10200	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	591-78-6	2-HEXANONE	ug/m3	0.95	0.6	J	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	67-63-0	2-PROPANOL	ug/m3	1.9	1.7	J	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	108-10-1	4-METHYL-2-PENTANONE	ug/m3	0.95		ND	6200	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	141-78-6	ACETIC ACID, ETHYL ESTER	ug/m3	0.95	6.1		NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	67-64-1	ACETONE	ug/m3	12		ND	6600	No	31000	No
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	75-05-8	ACETONITRILE	ug/m3	0.95	0.47	J	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	107-02-8	ACROLEIN	ug/m3	1		ND	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	107-13-1	ACRYLONITRILE	ug/m3	0.95		ND	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	107-05-1	ALLYL CHLORIDE	ug/m3	0.95		ND	30	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	80-56-8	ALPHA-PINENE	ug/m3	0.95		ND	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	71-43-2	BENZENE	ug/m3	0.19	0.76		14	No	14	No
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	100-44-7	BENZENE, (CHLOROMETHYL)-	ug/m3	0.95		ND	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	75-27-4	BROMODICHLOROMETHANE	ug/m3	0.95		ND	10	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	75-25-2	BROMOFORM	ug/m3	0.95		ND	200	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	74-83-9	BROMOMETHANE	ug/m3	0.95		ND	10	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	75-15-0	CARBON DISULFIDE	ug/m3	0.95		ND	1460	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	56-23-5	CARBON TETRACHLORIDE	ug/m3	0.95	0.39	J	10	No	100	No
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	108-90-7	CHLOROBENZENE	ug/m3	0.95		ND	102	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	124-48-1	CHLORODIBROMOMETHANE	ug/m3	0.95		ND	7	No	NA	NA

Attachment E-1

Indoor Air Sampling Results Compared to NJDEP RALS and HDNLs - March 2008
 163 Old River Road Building
 Quanta Resources Site
 Edgewater, NJ

Location ID	Field Sample ID	Sample Purpose	Analytical Method	Parameter Code	Parameter Name	Reporting Unit	Reporting Limit	Detected Result	Validation Qualifier	NJDEP RAL ug/m3	NJDEP RAL Exceed?	NJDEP HDNLs ug/m3	NJDEP HDNL Exceed?
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	75-00-3	CHLOROETHANE	ug/m3	0.95		ND	200	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	67-66-3	CHLOROFORM	ug/m3	0.95		ND	8	No	80	No
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	74-87-3	CHLOROMETHANE	ug/m3	0.95	0.99		190	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	156-59-2	CIS-1,2-DICHLOROETHENE	ug/m3	0.95		ND	72	No	400	No
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	10061-01-5	CIS-1,3-DICHLOROPROPENE	ug/m3	0.95		ND	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	110-82-7	CYCLOHEXANE	ug/m3	0.95		ND	12400	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	75-71-8	DICHLORODIFLUOROMETHANE	ug/m3	0.95	2.6		360	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	5989-27-5	D-LIMONENE	ug/m3	0.95	0.19	J	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	64-17-5	ETHANOL	ug/m3	9.5	26	J	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	100-41-4	ETHYLBENZENE	ug/m3	0.95	0.35	J	2200	No	4300	No
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	87-68-3	HEXACHLOROBUTADIENE	ug/m3	0.95		ND	8	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	98-82-8	ISOPROPYLBENZENE	ug/m3	0.95		ND	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	80-62-6	METHYL METHACRYLATE	ug/m3	0.95		ND	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	1634-04-4	METHYL TERT-BUTYL ETHER (MTBE)	ug/m3	0.95		ND	200	No	2000	No
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	75-09-2	METHYLENE CHLORIDE	ug/m3	0.95	0.41	J	400	No	1000	No
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	91-20-3	NAPHTHALENE	ug/m3	0.19	0.32		NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	123-86-4	N-BUTYL ACETATE	ug/m3	0.95	0.25	J	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	142-82-5	N-HEPTANE	ug/m3	0.95	0.25	J	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	110-54-3	N-HEXANE	ug/m3	0.95	0.47	J	1460	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	111-84-2	N-NONANE	ug/m3	0.95	0.37	J	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	111-65-9	N-OCTANE	ug/m3	0.95	0.3	J	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	103-65-1	N-PROPYLBENZENE	ug/m3	0.95		ND	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	95-47-6	O-XYLENE	ug/m3	0.95	0.45	J	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	115-07-1	PROPYLENE	ug/m3	0.95	1.3	J	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	100-42-5	STYRENE	ug/m3	0.95		ND	2000	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	127-18-4	TETRACHLOROETHENE	ug/m3	0.95	0.3	J	30	No	300	No
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	109-99-9	TETRAHYDROFURAN	ug/m3	0.95		ND	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	108-88-3	TOLUENE	ug/m3	0.95	2.6		10000	No	5100	No
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	156-60-5	TRANS-1,2-DICHLOROETHENE	ug/m3	0.95		ND	146	No	400	No
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	10061-02-6	TRANS-1,3-DICHLOROPROPENE	ug/m3	0.95		ND	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	79-01-6	TRICHLOROETHENE	ug/m3	0.95		ND	20	No	20	No
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	75-69-4	TRICHLOROFLUOROMETHANE	ug/m3	0.95	1.3		1460	No	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	108-05-4	VINYL ACETATE	ug/m3	9.5		ND	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	75-01-4	VINYL CHLORIDE	ug/m3	0.95		ND	7	No	70	No
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	Xylenes1314	XYLEMES, M & P	ug/m3	1.9	1.3	J	NA	NA	NA	NA
Q2-IA-02	Q2-IA-02-032508	REG	TO-15	1330-20-7	XYLEMES, TOTAL - sum of isomers	ug/m3	1.9	1.75	J	220	No	4300	No
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	71-55-6	1,1,1-TRICHLOROETHANE	ug/m3	0.79		ND	2000	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	79-34-5	1,1,2,2-TETRACHLOROETHANE	ug/m3	0.79		ND	3	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	79-00-5	1,1,2-TRICHLOROETHANE	ug/m3	0.79		ND	10	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	76-13-1	1,1,2-TRICHLOROTRIFLUOROETHANE	ug/m3	0.79	0.59	J	62000	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	75-34-3	1,1-DICHLOROETHANE	ug/m3	0.79		ND	1020	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	75-35-4	1,1-DICHLOROETHENE	ug/m3	0.79		ND	440	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	120-82-1	1,2,4-TRICHLOROBENZENE	ug/m3	0.79		ND	72	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	95-63-6	1,2,4-TRIMETHYLBENZENE	ug/m3	0.79		1.1		NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	ug/m3	0.79		ND	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	106-93-4	1,2-DIBROMOETHANE (EDB)	ug/m3	0.79		ND	0.3	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	95-50-1	1,2-DICHLOROBENZENE	ug/m3	0.79		ND	300	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	107-06-2	1,2-DICHLOROETHANE	ug/m3	0.79		ND	7	No	NA	NA

Attachment E-1

Indoor Air Sampling Results Compared to NJDEP RALS and HDNLs - March 2008
 163 Old River Road Building
 Quanta Resources Site
 Edgewater, NJ

Location ID	Field Sample ID	Sample Purpose	Analytical Method	Parameter Code	Parameter Name	Reporting Unit	Reporting Limit	Detected Result	Validation Qualifier	NJDEP RAL ug/m3	NJDEP RAL Exceed?	NJDEP HDNLs ug/m3	NJDEP HDNL Exceed?
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	78-87-5	1,2-DICHLOROPROpane	ug/m3	0.79		ND	9	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	76-14-2	1,2-DICHLOROTETRAFLUOROETHANE	ug/m3	0.79		ND	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	108-67-8	1,3,5-TRIMETHYLBENZENE	ug/m3	0.79	0.38	J	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	106-99-0	1,3-BUTADIENE	ug/m3	0.79		ND	6	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	541-73-1	1,3-DICHLOROBENZENE	ug/m3	0.79		ND	22	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	106-46-7	1,4-DICHLOROBENZENE	ug/m3	0.79	0.16	J	30	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	123-91-1	1,4-DIOXANE	ug/m3	0.79		ND	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	622-96-8	1-ETHYL-4-METHYL-BENZENE	ug/m3	0.79	0.35	J	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	78-93-3	2-BUTANONE (MEK)	ug/m3	1.6		ND	10200	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	591-78-6	2-HEXANONE	ug/m3	0.79	0.33	J	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	67-63-0	2-PROPANOL	ug/m3	1.6	35		NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	108-10-1	4-METHYL-2-PENTANONE	ug/m3	0.79	0.25	J	6200	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	141-78-6	ACETIC ACID, ETHYL ESTER	ug/m3	0.79	13		NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	67-64-1	ACETONE	ug/m3	13		ND	6600	No	31000	No
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	75-05-8	ACETONITRILE	ug/m3	0.79	0.31	J	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	107-02-8	ACROLEIN	ug/m3	0.79	0.95		NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	107-13-1	ACRYLONITRILE	ug/m3	0.79		ND	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	107-05-1	ALLYL CHLORIDE	ug/m3	0.79		ND	30	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	80-56-8	ALPHA-PINENE	ug/m3	0.79	0.28	J	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	71-43-2	BENZENE	ug/m3	0.16	0.81		14	No	14	No
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	100-44-7	BENZENE, (CHLOROMETHYL)-	ug/m3	0.79		ND	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	75-27-4	BROMODICHLOROMETHANE	ug/m3	0.79		ND	10	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	75-25-2	BROMOFORM	ug/m3	0.79		ND	200	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	74-83-9	BROMOMETHANE	ug/m3	0.79		ND	10	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	75-15-0	CARBON DISULFIDE	ug/m3	0.79		ND	1460	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	56-23-5	CARBON TETRACHLORIDE	ug/m3	0.79	0.47	J	10	No	100	No
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	108-90-7	CHLOROBENZENE	ug/m3	0.79		ND	102	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	124-48-1	CHLORODIBROMOMETHANE	ug/m3	0.79		ND	7	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	75-00-3	CHLOROETHANE	ug/m3	0.79		ND	200	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	67-66-3	CHLOROFORM	ug/m3	0.79		ND	8	No	80	No
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	74-87-3	CHLOROMETHANE	ug/m3	0.79	1.1		190	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	156-59-2	CIS-1,2-DICHLOROETHENE	ug/m3	0.79		ND	72	No	400	No
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	10061-01-5	CIS-1,3-DICHLOROPROPENE	ug/m3	0.79		ND	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	110-82-7	CYCLOHEXANE	ug/m3	0.79		ND	12400	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	75-71-8	DICHLORODIFLUOROMETHANE	ug/m3	0.79	2.6		360	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	5989-27-5	D-LIMONENE	ug/m3	0.79	0.19	J	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	64-17-5	ETHANOL	ug/m3	7.9	130		NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	100-41-4	ETHYLBENZENE	ug/m3	0.79	0.43	J	2200	No	4300	No
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	87-68-3	HEXACHLOROBUTADIENE	ug/m3	0.79		ND	8	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	98-82-8	ISOPROPYLBENZENE	ug/m3	0.79		ND	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	80-62-6	METHYL METHACRYLATE	ug/m3	0.79		ND	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	1634-04-4	METHYL TERT-BUTYL ETHER (MTBE)	ug/m3	0.79		ND	200	No	2000	No
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	75-09-2	METHYLENE CHLORIDE	ug/m3	0.79	0.36	J	400	No	1000	No
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	91-20-3	NAPHTHALENE	ug/m3	0.16	0.42		NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	123-86-4	N-BUTYL ACETATE	ug/m3	0.79	0.24	J	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	142-82-5	N-HEPTANE	ug/m3	0.79	0.29	J	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	110-54-3	N-HEXANE	ug/m3	0.79	0.44	J	1460	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	111-84-2	N-NONANE	ug/m3	0.79	2.4		NA	NA	NA	NA

Attachment E-1

Indoor Air Sampling Results Compared to NJDEP RALS and HDNLs - March 2008
163 Old River Road Building
Quanta Resources Site
Edgewater, NJ

Location ID	Field Sample ID	Sample Purpose	Analytical Method	Parameter Code	Parameter Name	Reporting Unit	Reporting Limit	Detected Result	Validation Qualifier	NJDEP RAL ug/m ³	NJDEP RAL Exceed?	NJDEP HDNLs ug/m ³	NJDEP HDNL Exceed?
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	111-65-9	N-OCTANE	ug/m ³	0.79	0.41	J	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	103-65-1	N-PROPYLBENZENE	ug/m ³	0.79	0.22	J	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	95-47-6	O-XYLENE	ug/m ³	0.79	0.61	J	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	115-07-1	PROPYLENE	ug/m ³	0.79	2.5	J	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	100-42-5	STYRENE	ug/m ³	0.79		ND	2000	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	127-18-4	TETRACHLOROETHENE	ug/m ³	0.79	0.28	J	30	No	300	No
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	109-99-9	TETRAHYDROFURAN	ug/m ³	0.79		ND	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	108-88-3	TOLUENE	ug/m ³	0.79	2.6		10000	No	5100	No
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	156-60-5	TRANS-1,2-DICHLOROETHENE	ug/m ³	0.79		ND	146	No	400	No
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	10061-02-6	TRANS-1,3-DICHLOROPROPENE	ug/m ³	0.79		ND	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	79-01-6	TRICHLOROETHENE	ug/m ³	0.79		ND	20	No	20	No
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	75-69-4	TRICHLOROFLUOROMETHANE	ug/m ³	0.79	1.4		1460	No	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	108-05-4	VINYL ACETATE	ug/m ³	7.9		ND	NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	75-01-4	VINYL CHLORIDE	ug/m ³	0.79		ND	7	No	70	No
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	Xylenes1314	XYLEMES, M & P	ug/m ³	1.6	1.6		NA	NA	NA	NA
Q2-IA-03	Q2-IA-03-032508	REG	TO-15	1330-20-7	XYLEMES, TOTAL - sum of isomers	ug/m ³	1.6	2.21	J	220	No	4300	No

Notes:

U = Below laboratory reporting limits

J = Data below calibration curve for that constituent, quantity estimated.

Location ID	Field Sample ID	Sample Purpose	Analytical Method	Parameter Code	Parameter Name	Reporting Unit	Reporting Limit	Detected Result	Validation Qualifier	IA-10-6 Target Risk		IA-10-6 Target Risk Exceed?		IA-10-5 Target Risk		Indoor Air Response Levels		IA-10-4 Target Risk		IA HQ > 0.1		IA HQ = 1	
										IA-10-6 Target Risk	Exceed?	IA-10-6 Target Risk Exceed?	IA-10-5 Target Risk Exceed?	Response 10-4 Target Risk	Risk Exceed?	IA HQ = 0.1	IA HQ > 1	IA HQ = 1	IA HQ > 1	IA HQ = 1	IA HQ > 1		
G24-A-01	O2-A-01-032508	REG	TO-15	71-55-6	1,1,1-TRICHLOROETHANE	ug/m ³	0.96	ND	NA	NA	NA	NA	NA	NA	NA	1.00E+02	No	1.00E+03	No	NA	NA	NA	
G24-A-01	O2-A-01-032508	REG	TO-15	70-34-5	1,1,2-TRICHLOROETHANE	ug/m ³	0.96	ND	3.30E-02	No	3.30E+00	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
G24-A-01	O2-A-01-032508	REG	TO-15	70-00-5	1,1,2-TRICHLOROETHANE	ug/m ³	0.96	ND	1.20E-01	No	1.20E+01	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
G24-A-01	O2-A-01-032508	REG	TO-15	76-13-1	1,1,2-TRICHLOROTRIFLUOROETHANE	ug/m ³	0.96	0.72	J	NA	NA	NA	NA	NA	NA	NA	3.10E+03	No	3.10E+04	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-34-3	1,1-DICHLOROETHANE	ug/m ³	0.96	ND	NA	NA	NA	NA	NA	NA	NA	5.10E+01	No	5.10E+02	No	NA	NA	NA	
G24-A-01	O2-A-01-032508	REG	TO-15	75-35-4	1,1-DICHLOROETHANE	ug/m ³	0.96	ND	NA	NA	NA	NA	NA	NA	NA	2.10E+01	No	2.10E+02	No	NA	NA	NA	
G24-A-01	O2-A-01-032508	REG	TO-15	120-82-1	1,2,4-TRICHLOROBENZENE	ug/m ³	0.96	1	ND	NA	NA	NA	NA	NA	NA	3.70E+00	No	3.70E+00	No	NA	NA	NA	
G24-A-01	O2-A-01-032508	REG	TO-15	95-63-6	1,2,4-TRIMETHYLBENZENE	ug/m ³	0.96	ND	NA	NA	NA	NA	NA	NA	NA	6.20E+00	No	6.20E+00	No	NA	NA	NA	
G24-A-01	O2-A-01-032508	REG	TO-15	106-93-4	1,2-BI(BROMO-METHANE) (EDB)	ug/m ³	0.96	ND	3.40E-03	No	3.40E-02	No	NA	NA	NA	NA	2.80E-01	No	2.80E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	95-50-1	1,2-DICHLOROBENZENE	ug/m ³	0.96	ND	NA	NA	NA	NA	NA	NA	NA	1.50E+01	No	1.50E+02	No	NA	NA	NA	
G24-A-01	O2-A-01-032508	REG	TO-15	70-67-2	1,2-DICHLOROETHANE	ug/m ³	0.96	ND	7.40E-02	No	7.40E-01	No	NA	NA	NA	NA	7.40E+00	No	7.40E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	76-87-5	1,2-DICHLOROPROPANE	ug/m ³	0.96	ND	9.90E-02	No	9.90E+00	No	NA	NA	NA	NA	9.90E+00	No	9.90E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	76-14-2	1,2-DICHLOROTETRAFLUOROETHANE	ug/m ³	0.96	0.34	J	NA	NA	NA	NA	NA	NA	NA	6.20E-01	No	6.20E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	106-74-8	1,3,5-TRIMETHYLBENZENE	ug/m ³	0.96	0.38	J	NA	NA	NA	NA	NA	NA	NA	6.10E-01	No	6.10E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	106-93-0	1,3,5-TRICHLOROBENZENE	ug/m ³	0.96	ND	NA	NA	NA	NA	NA	NA	NA	1.10E+00	No	1.10E+01	No	NA	NA	NA	
G24-A-01	O2-A-01-032508	REG	TO-15	106-46-7	1,4-DICHLOROBENZENE	ug/m ³	0.96	0.23	J	NA	NA	NA	NA	NA	NA	NA	3.10E+00	No	3.10E+01	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	123-01-4	1,4-DIOXANE	ug/m ³	0.96	ND	NA	NA	NA	NA	NA	NA	NA	6.10E-02	No	6.10E+00	No	NA	NA	NA	
G24-A-01	O2-A-01-032508	REG	TO-15	62-66-8	1-ETHYL-4-METHYL-BENZENE	ug/m ³	0.96	0.37	J	NA	NA	NA	NA	NA	NA	NA	5.00E+00	No	5.00E+01	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	78-93-3	2-BUTANONE (MEK)	ug/m ³	0.96	1.3	ND	NA	NA	NA	NA	NA	NA	NA	5.10E+02	No	5.10E+03	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	106-01-1	CIS-1,3-DICHLOROPROPENE	ug/m ³	0.96	ND	NA	NA	NA	NA	NA	NA	NA	4.80E-02	No	4.80E+00	No	NA	NA	NA	
G24-A-01	O2-A-01-032508	REG	TO-15	107-02-8	ACROLEIN	ug/m ³	0.96	0.6	ND	NA	NA	NA	NA	NA	NA	NA	2.10E-03	No	2.10E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	107-13-1	ACRYLONITRILE	ug/m ³	0.96	ND	NA	NA	NA	NA	NA	NA	NA	2.80E-03	No	2.80E+00	No	NA	NA	NA	
G24-A-01	O2-A-01-032508	REG	TO-15	107-05-1	ALLYL CHLORIDE	ug/m ³	0.96	ND	NA	NA	NA	NA	NA	NA	NA	1.00E+00	No	1.00E+01	No	NA	NA	NA	
G24-A-01	O2-A-01-032508	REG	TO-15	107-05-1	ALLYL CHLORIDE	ug/m ³	0.96	ND	1.00E-00	No	1.00E+01	No	NA	NA	NA	1.00E+02	No	1.00E+02	No	NA	NA	NA	
G24-A-01	O2-A-01-032508	REG	TO-15	80-56-8	ALPHA-PINENE	ug/m ³	0.96	0.98	ND	NA	NA	NA	NA	NA	NA	NA	6.20E-01	No	6.20E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	71-43-2	BENZENE	ug/m ³	0.96	1	2.50E-01	No	2.50E+00	No	NA	NA	NA	NA	2.50E+01	No	2.50E+02	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	106-04-4	BENZENE, (CHLOROMETHYL)-	ug/m ³	0.96	ND	NA	NA	NA	NA	NA	NA	NA	NA	4.00E-03	No	4.00E+02	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-27-4	BROMODIOXOLMETHANE	ug/m ³	0.96	ND	1.10E-01	No	1.10E+00	No	NA	NA	NA	NA	1.10E+01	No	1.10E+02	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-25-2	BROMODIFLUOROMETHANE	ug/m ³	0.96	ND	1.70E-01	No	1.70E+01	No	NA	NA	NA	NA	5.00E-01	No	5.00E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-25-2	BROMODIFLUOROMETHANE	ug/m ³	0.96	ND	1.70E-01	No	1.70E+01	No	NA	NA	NA	NA	5.00E-01	No	5.00E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-25-2	BROMODIFLUOROMETHANE	ug/m ³	0.96	ND	1.70E-01	No	1.70E+01	No	NA	NA	NA	NA	5.00E-01	No	5.00E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-25-2	BROMODIFLUOROMETHANE	ug/m ³	0.96	ND	1.70E-01	No	1.70E+01	No	NA	NA	NA	NA	5.00E-01	No	5.00E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-25-2	BROMODIFLUOROMETHANE	ug/m ³	0.96	ND	1.70E-01	No	1.70E+01	No	NA	NA	NA	NA	5.00E-01	No	5.00E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-25-2	BROMODIFLUOROMETHANE	ug/m ³	0.96	ND	1.70E-01	No	1.70E+01	No	NA	NA	NA	NA	5.00E-01	No	5.00E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-25-2	BROMODIFLUOROMETHANE	ug/m ³	0.96	ND	1.70E-01	No	1.70E+01	No	NA	NA	NA	NA	5.00E-01	No	5.00E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-25-2	BROMODIFLUOROMETHANE	ug/m ³	0.96	ND	1.70E-01	No	1.70E+01	No	NA	NA	NA	NA	5.00E-01	No	5.00E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-25-2	BROMODIFLUOROMETHANE	ug/m ³	0.96	ND	1.70E-01	No	1.70E+01	No	NA	NA	NA	NA	5.00E-01	No	5.00E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-25-2	BROMODIFLUOROMETHANE	ug/m ³	0.96	ND	1.70E-01	No	1.70E+01	No	NA	NA	NA	NA	5.00E-01	No	5.00E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-25-2	BROMODIFLUOROMETHANE	ug/m ³	0.96	ND	1.70E-01	No	1.70E+01	No	NA	NA	NA	NA	5.00E-01	No	5.00E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-25-2	BROMODIFLUOROMETHANE	ug/m ³	0.96	ND	1.70E-01	No	1.70E+01	No	NA	NA	NA	NA	5.00E-01	No	5.00E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-25-2	BROMODIFLUOROMETHANE	ug/m ³	0.96	ND	1.70E-01	No	1.70E+01	No	NA	NA	NA	NA	5.00E-01	No	5.00E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-25-2	BROMODIFLUOROMETHANE	ug/m ³	0.96	ND	1.70E-01	No	1.70E+01	No	NA	NA	NA	NA	5.00E-01	No	5.00E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-25-2	BROMODIFLUOROMETHANE	ug/m ³	0.96	ND	1.70E-01	No	1.70E+01	No	NA	NA	NA	NA	5.00E-01	No	5.00E+00	No	NA	NA	NA
G24-A-01	O2-A-01-032508	REG	TO-15	75-25-2	BROMODIFLUOROMETHANE	ug/m ³	0.96	ND	1.70E-01	No	1.70E+01	No	NA	NA	NA	NA							

Location ID	Field Sample ID	Sample Purpose	Analytical Method	Parameter Code	Parameter Name	Reporting Unit	Reporting Limit	Detected Result	Validation Qualifier	IA 10-6 Target Risk	IA 10-6 Target Risk Exceeded?	IA 10-5 Target Risk	IA 10-5 Target Risk Exceeded?	IA 10-5 Target Response Levels		IA 10-4 Target Response Levels		IA HQ = 0.1 Exceeded?	IA HQ = 1 Exceeded?	
														Indoor Air Response Level	Indoor Air Risk Exceeded?	Indoor Air Response Level	Indoor Air Risk Exceeded?			
Q2-A-02	Q2-A-02-032508	REG	TO-15	74-37-3	CHLOROMETHANE	ug/m ³	0.95	0.99	ND	NA	NA	NA	NA	NA	9.50E+00	No	9.50E+01	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	156-59-2	CIS-1,2-DICHLOROETHENE	ug/m ³	0.95	ND	ND	NA	NA	NA	NA	NA	3.60E+00	No	3.60E+01	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	10061-01-5	CIS-1,3-DICHLOROPROPENE	ug/m ³	0.95	ND	ND	NA	NA	NA	NA	NA	4.80E+01	No	4.80E+01	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	110-82-7	CYCLOHEXANE	ug/m ³	0.95	ND	ND	NA	NA	NA	NA	NA	6.20E+02	No	6.20E+03	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	75-71-8	DICHLORODIFLUOROMETHANE	ug/m ³	0.95	2.6	ND	NA	NA	NA	NA	NA	1.80E+01	No	1.80E+02	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	5989-27-5	D-LIMONENE	ug/m ³	0.95	0.19	J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Q2-A-02	Q2-A-02-032508	REG	TO-15	64-17-5	ETHANOL	ug/m ³	0.5	26	J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Q2-A-02	Q2-A-02-032508	REG	TO-15	100-41-4	ETHYLBENZENE	ug/m ³	0.95	0.35	J	NA	NA	NA	NA	NA	NA	1.10E+02	No	1.10E+03	No	No
Q2-A-02	Q2-A-02-032508	REG	TO-15	87-69-3	HEXAChLOROBUTADIENE	ug/m ³	0.95	ND	8.60E-02	No	8.60E+00	No	NA	NA	NA	NA	NA	NA	NA	
Q2-A-02	Q2-A-02-032508	REG	TO-15	98-42-4	ISOPROPYLBENZENE	ug/m ³	0.95	ND	ND	NA	NA	NA	NA	NA	4.00E+01	No	4.00E+02	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	60-62-0	METHYL ACRYLATE	ug/m ³	0.95	ND	ND	NA	NA	NA	NA	NA	7.30E+01	No	7.30E+02	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	163-01-4	METHYL TERT-BUTYL ETHER (MTBE)	ug/m ³	0.95	ND	2.00E+00	No	2.00E+01	No	NA	NA	NA	NA	NA	NA	NA	
Q2-A-02	Q2-A-02-032508	REG	TO-15	75-09-2	METHYLENE CHLORIDE	ug/m ³	0.95	0.41	J	4.00E+00	No	4.00E+01	No	NA	NA	NA	NA	NA	NA	
Q2-A-02	Q2-A-02-032508	REG	TO-15	81-20-3	NAPHTHALENE	ug/m ³	0.19	0.32	ND	NA	NA	NA	NA	NA	3.10E+01	EXCEED	3.10E+00	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	123-86-4	NEBUTYL ACETATE	ug/m ³	0.95	0.25	J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Q2-A-02	Q2-A-02-032508	REG	TO-15	142-82-5	N-HEPTANE	ug/m ³	0.95	0.25	J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Q2-A-02	Q2-A-02-032508	REG	TO-15	110-54-1	N-HEXANE	ug/m ³	0.95	0.47	J	NA	NA	NA	NA	NA	NA	2.10E+01	No	2.10E+02	No	No
Q2-A-02	Q2-A-02-032508	REG	TO-15	111-84-2	N-NONANE	ug/m ³	0.95	0.37	J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Q2-A-02	Q2-A-02-032508	REG	TO-15	100-65-9	N-OCTANE	ug/m ³	0.95	0.3	J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Q2-A-02	Q2-A-02-032508	REG	TO-15	100-41-4	OXYLENE	ug/m ³	0.95	0.45	J	NA	NA	NA	NA	NA	NA	1.50E+01	No	1.50E+02	No	No
Q2-A-02	Q2-A-02-032508	REG	TO-15	85-47-4	P-XYLENE	ug/m ³	0.95	1.3	J	NA	NA	NA	NA	NA	NA	1.10E+02	No	1.10E+03	No	No
Q2-A-02	Q2-A-02-032508	REG	TO-15	100-49-5	STYRENE	ug/m ³	0.95	ND	ND	NA	NA	NA	NA	NA	1.00E+02	No	1.00E+03	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	127-18-4	TETRAChLOROETHENE	ug/m ³	0.95	0.3	J	3.20E-01	No	3.20E+00	No	NA	NA	NA	NA	NA	NA	
Q2-A-02	Q2-A-02-032508	REG	TO-15	109-89-8	TETRAHyDROFURAN	ug/m ³	0.95	ND	ND	NA	NA	NA	NA	NA	9.90E-02	No	9.90E+01	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	108-88-3	TOLUENE	ug/m ³	0.95	2.6	ND	NA	NA	NA	NA	NA	4.00E+01	No	4.00E+02	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	156-80-5	TRANS-1,2-DICHLOROETHENE	ug/m ³	0.95	ND	ND	NA	NA	NA	NA	NA	7.30E+00	No	7.30E+01	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	10061-02-6	TRANS-1,3-DICHLOROPROPENE	ug/m ³	0.95	ND	ND	NA	NA	NA	NA	NA	4.80E-02	No	4.80E+01	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	79-01-6	TRICHLOROETHENE	ug/m ³	0.95	ND	5.00E-02	No	5.00E+01	No	NA	NA	NA	NA	NA	NA	NA	
Q2-A-02	Q2-A-02-032508	REG	TO-15	75-69-4	TRICHLOROFUOROMETHANE	ug/m ³	0.95	0.95	1.3	ND	NA	NA	NA	NA	NA	7.30E+01	No	7.30E+02	No	No
Q2-A-02	Q2-A-02-032508	REG	TO-15	108-05-4	VINYLCETATE	ug/m ³	0.95	ND	ND	NA	NA	NA	NA	NA	2.10E+01	No	2.10E+02	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	109-89-8	VINYLCYCLOPENTANE	ug/m ³	0.95	ND	ND	NA	NA	NA	NA	NA	1.00E+01	No	1.00E+02	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	109-89-8	XYLENES, M & P	ug/m ³	0.95	ND	ND	NA	NA	NA	NA	NA	1.10E+01	No	1.10E+02	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	XYLENES1314	XYLENES, M & P	ug/m ³	0.95	ND	ND	NA	NA	NA	NA	NA	1.10E+01	No	1.10E+02	No	No	
Q2-A-02	Q2-A-02-032508	REG	TO-15	1330-20-7	XYLENES, TOTAL - sum of isomers	ug/m ³	0.95	1.9	1.75	ND	NA	NA	NA	NA	1.10E+01	No	1.10E+02	No	No	
Q2-A-03	Q2-A-03-032508	REG	TO-15	71-55-6	1,1,1-TRICHLOROETHANE	ug/m ³	0.95	ND	ND	NA	NA	NA	NA	NA	1.00E+02	No	1.00E+03	No	No	
Q2-A-03	Q2-A-03-032508	REG	TO-15	78-34-5	1,1,2-TETRACHLOROETHANE	ug/m ³	0.95	ND	3.30E-02	No	3.30E+01	No	NA	NA	NA	NA	NA	NA	NA	
Q2-A-03	Q2-A-03-032508	REG	TO-15	79-00-7	1,1,2-TETRACHLOROETHANE	ug/m ³	0.95	ND	1.20E-01	No	1.20E+00	No	NA	NA	NA	NA</				

Attachment E-3

Sub Slab Sampling Results Compared to Response Levels, March 2008
 163 Old River Road Building
 Quanta Resources Site
 Edgewater, NJ

Location ID	Field Sample ID	Sample Purpose	Analytical Method	Parameter Code	Parameter Name	Reporting Unit	Reporting Limit	Detected Result	Validation Qualifier	SS 10-6 Target Risk			SS 10-5 Target Risk			SS 10-4 Target Risk			SS HQ = 0.1		
										SS 10-6 Target Risk Exceed?	SS 10-5 Target Risk Exceed?	SS 10-4 Target Risk Exceed?	SS HQ = 0.1 Exceed?	SS HQ = 1 Exceed?	SS HQ = 0.1 Exceed?	SS HQ = 1 Exceed?	SS HQ = 0.1 Exceed?	SS HQ = 1 Exceed?	SS HQ = 0.1 Exceed?	SS HQ = 1 Exceed?	
Q2-VI-01	C2-VI-01-032408	REG	EPA 3C	124-38-9	CARBON DIOXIDE	%VV	0.31	21.9	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q2-VI-01	C2-VI-01-032408	REG	EPA 3C	AROX	OXYGEN + ARGON	%VV	0.31		ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q2-VI-01	C2-VI-01-032408	REG	TO-15	71-55-6	1,1,1-TRICHLOROETHANE	ug/m3	1.9		ND	NA	NA	NA	NA	NA	NA	NA	1.00E+03	No	1.00E+04	No	No
Q2-VI-01	C2-VI-01-032408	REG	TO-15	79-34-5	1,1,2,2-TETRACHLOROETHANE	ug/m3	1.9		ND	3.30E-01	No	3.30E+00	No	3.30E+01	No	NA	NA	NA	NA	NA	NA
Q2-VI-01	C2-VI-01-032408	REG	TO-15	79-00-5	1,1,2-TRICHLOROETHANE	ug/m3	1.9		ND	1.20E+00	No	1.20E+01	No	1.20E+02	No	NA	NA	NA	NA	NA	NA
Q2-VI-01	C2-VI-01-032408	REG	TO-15	76-13-1	1,1,2-TRICHLOROTRIFLUOROETHANE	ug/m3	1.9	0.64	J	NA	NA	NA	NA	NA	NA	NA	3.10E+04	No	3.10E+05	No	No
Q2-VI-01	C2-VI-01-032408	REG	TO-15	75-34-3	1,1-DICHLOROETHANE	ug/m3	1.9		ND	NA	NA	NA	NA	NA	NA	5.10E+02	No	5.10E+03	No	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	75-35-4	1,1-DICHLOROETHENE	ug/m3	1.9		ND	NA	NA	NA	NA	NA	NA	2.10E+02	No	2.10E+03	No	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	120-82-1	1,2,4-TRICHLOROBENZENE	ug/m3	1.9		ND	NA	NA	NA	NA	NA	NA	3.70E+00	No	3.70E+01	No	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	95-63-6	1,2,4-TRIMETHYLBENZENE	ug/m3	1.9	25	ND	NA	NA	NA	NA	NA	NA	6.20E+00	EXCEED	6.20E+01	No	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	95-12-8	1,2-DIBROMO-3-CHLOROPROPANE	ug/m3	1.9		ND	NA	NA	NA	NA	NA	NA	2.80E+00	No	2.80E+01	No	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	106-93-4	1,2-DIBROMOETHANE (EDB)	ug/m3	1.9		ND	3.40E-02	No	3.40E-01	No	3.40E+00	No	NA	NA	NA	NA	NA	NA
Q2-VI-01	C2-VI-01-032408	REG	TO-15	95-50-1	1,2-DICHLOROBENZENE	ug/m3	1.9		ND	NA	NA	NA	NA	NA	NA	1.50E+02	No	1.50E+03	No	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	106-06-2	1,2-DICHLOROETHANE	ug/m3	1.9		ND	7.40E-01	No	7.40E+00	No	7.40E+01	No	NA	NA	NA	NA	NA	NA
Q2-VI-01	C2-VI-01-032408	REG	TO-15	78-87-5	1,2-DICHLOROPROPANE	ug/m3	1.9		ND	9.90E-01	No	9.90E+00	No	9.90E+01	No	NA	NA	NA	NA	NA	NA
Q2-VI-01	C2-VI-01-032408	REG	TO-15	76-14-2	1,2-DICHLOROTETRAFLUOROETHANE	ug/m3	1.9		ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q2-VI-01	C2-VI-01-032408	REG	TO-15	108-67-8	1,3,5-TRIMETHYLBENZENE	ug/m3	1.9	9	ND	NA	NA	NA	NA	NA	NA	6.20E+00	EXCEED	6.20E+01	No	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	105-59-0	1,3-BUTADIENE	ug/m3	1.9		ND	6.10E-01	No	6.10E+00	No	6.10E+01	No	NA	NA	NA	NA	NA	NA
Q2-VI-01	C2-VI-01-032408	REG	TO-15	541-73-1	1,3-DICHLOROBENZENE	ug/m3	1.9		ND	NA	NA	NA	NA	NA	NA	1.10E+01	No	1.10E+02	No	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	106-46-7	1,4-DICHLOROBENZENE	ug/m3	1.9		ND	3.10E+00	No	3.10E+01	No	3.10E+02	No	NA	NA	NA	NA	NA	NA
Q2-VI-01	C2-VI-01-032408	REG	TO-15	123-91-1	1,4-DIOXANE	ug/m3	1.9		ND	NA	NA	NA	NA	NA	NA	6.10E-01	No	6.10E+00	No	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	622-96-8	1-ETHYL-4-METHYL-BENZENE	ug/m3	1.9	8.1	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q2-VI-01	C2-VI-01-032408	REG	TO-15	78-93-3	2-BUTANONE (MEK)	ug/m3	3.8	5.3	ND	NA	NA	NA	NA	NA	NA	5.10E+03	No	5.10E+04	No	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	591-78-2	2-HEXANONE	ug/m3	1.9	1.2	J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q2-VI-01	C2-VI-01-032408	REG	TO-15	67-63-0	2-PROPANOL	ug/m3	3.8	4.4	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q2-VI-01	C2-VI-01-032408	REG	TO-15	108-10-1	4-METHYL-2-PENTANONE	ug/m3	1.9	190	ND	NA	NA	NA	NA	NA	NA	3.10E+03	No	3.10E+04	No	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	141-78-6	ACETIC ACID, ETHYL ESTER	ug/m3	1.9	3.3	ND	NA	NA	NA	NA	NA	NA	7.30E+02	No	7.30E+03	No	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	67-84-1	ACETONE	ug/m3	41		ND	NA	NA	NA	NA	NA	NA	3.30E+03	No	3.30E+04	No	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	75-05-8	ACETONITRILE	ug/m3	1.9	0.87	J	NA	NA	NA	NA	NA	NA	6.20E+01	No	6.20E+02	No	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	107-02-8	ACROLEIN	ug/m3	1.9	2.3	ND	NA	NA	NA	NA	NA	NA	2.10E-02	EXCEED	2.10E-01	EXCEED	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	107-13-1	ACRYLONITRILE	ug/m3	1.9		ND	NA	NA	NA	NA	NA	NA	2.80E-02	No	2.80E-01	No	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	107-05-1	ALLYL CHLORIDE	ug/m3	1.9		ND	1.00E+01	No	1.00E+02	No	1.00E+03	No	NA	NA	NA	NA	NA	NA
Q2-VI-01	C2-VI-01-032408	REG	TO-15	80-56-8	ALPHA-PINENE	ug/m3	1.9		ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q2-VI-01	C2-VI-01-032408	REG	TO-15	71-43-2	BENZENE	ug/m3	1.9		ND	2.50E+00	No	2.50E+01	No	2.50E+02	No	NA	NA	NA	NA	NA	NA
Q2-VI-01	C2-VI-01-032408	REG	TO-15	100-44-7	BENZENE, (CHLOROMETHYL)-	ug/m3	1.9		ND	NA	NA	NA	NA	NA	NA	4.00E-02	No	4.00E-01	No	No	
Q2-VI-01	C2-VI-01-032408	REG	TO-15	75-27-4	BROMODICHLOROMETHANE	ug/m3	1.9		ND	1.10E+00	No	1.10E+01	No	1.10E+02							

Attachment E-3

Sub Slab Sampling Results Compared to Response Levels, March 2008
 163 Old River Road Building
 Quanta Resources Site
 Edgewater, NJ

Location ID	Field Sample ID	Sample Purpose	Analytical Method	Parameter Code	Parameter Name	Reporting Unit	Reporting Limit	Detected Result	Validation Qualifier	SS 10-6 Target Risk			SS 10-5 Target Risk			SS 10-4 Target Risk			SS HQ = 0.1		
										Exceed?	SS 10-6 Target Risk	Exceed?	SS 10-5 Target Risk	Exceed?	SS 10-4 Target Risk	Exceed?	SS HQ = 0.1	Exceed?	SS HQ = 1	Exceed?	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	120-2-1	1,2,4-TRICHLOROBENZENE	ug/m3	5.9	2100	ND	NA	NA	NA	NA	NA	NA	NA	3.70E+00	No	3.70E+01	No	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	95-63-6	1,2,4-TRIMETHYLBENZENE	ug/m3	5.9		ND	NA	NA	NA	NA	NA	NA	NA	6.20E+00	EXCEED	6.20E+01	EXCEED	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	ug/m3	5.9		ND	NA	NA	NA	NA	NA	NA	NA	2.80E+00	No	2.80E+01	No	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	106-93-4	1,2-DIBROMOETHANE (EDB)	ug/m3	5.9		ND	3.40E-02	No	3.40E-01	No	3.40E+00	No	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	95-50-1	1,2-DICHLOROBENZENE	ug/m3	5.9		ND	NA	NA	NA	NA	NA	NA	NA	1.50E+02	No	1.50E+03	No	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	107-06-2	1,2-DICHLOROETHANE	ug/m3	5.9		ND	7.40E-01	No	7.40E+00	No	7.40E+01	No	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	78-87-5	1,2-DICHLOROPROPANE	ug/m3	5.9		ND	9.90E-01	No	9.90E+00	No	9.90E+01	No	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	76-14-2	1,2-DICHLOROTETRAFLUOROETHANE	ug/m3	5.9		ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	108-67-8	1,3,5-TRIMETHYLBENZENE	ug/m3	5.9	690	ND	NA	NA	NA	NA	NA	NA	NA	6.20E+00	EXCEED	6.20E+01	EXCEED	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	106-99-3	1,3-BUTADIENE	ug/m3	5.9		ND	6.10E-01	No	6.10E+00	No	6.10E+01	No	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	541-73-1	1,3-DICHLOROBENZENE	ug/m3	5.9		ND	NA	NA	NA	NA	NA	NA	NA	1.10E+01	No	1.10E+02	No	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	108-46-7	1,4-DICHLOROBENZENE	ug/m3	5.9		ND	3.10E+00	No	3.10E+01	No	3.10E+02	No	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	123-91-1	1,4-DIOXANE	ug/m3	5.9		ND	NA	NA	NA	NA	NA	NA	NA	6.10E-01	No	6.10E+00	No	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	622-96-8	1-ETHYL-4-METHYL-BENZENE	ug/m3	5.9	610	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	78-93-3	2-BUTANONE (MEK)	ug/m3	12	16	ND	NA	NA	NA	NA	NA	NA	NA	5.10E+03	No	5.10E+04	No	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	591-78-6	2-HEXANONE	ug/m3	5.9		ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	67-63-0	2-PROPANOL	ug/m3	12	9.6	J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	108-10-1	4-METHYL-2-PENTANONE	ug/m3	5.9	140	ND	NA	NA	NA	NA	NA	NA	NA	3.10E+03	No	3.10E+04	No	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	141-78-8	ACETIC ACID, ETHYL ESTER	ug/m3	5.9	4.1	J	NA	NA	NA	NA	NA	NA	NA	7.30E+02	No	7.30E+03	No	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	67-64-1	ACETONE	ug/m3	68		ND	NA	NA	NA	NA	NA	NA	NA	3.30E+03	No	3.30E+04	No	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	75-05-8	ACETONITRILE	ug/m3	5.9		ND	NA	NA	NA	NA	NA	NA	NA	6.20E+01	No	6.20E+02	No	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	107-02-8	ACROLEIN	ug/m3	1.8		ND	NA	NA	NA	NA	NA	NA	NA	2.10E-02	No	2.10E-01	No	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	107-13-1	ACRYLONITRILE	ug/m3	5.9		ND	NA	NA	NA	NA	NA	NA	NA	2.80E-02	No	2.80E-01	No	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	107-05-1	ALLYL CHLORIDE	ug/m3	5.9		ND	1.00E-01	No	1.00E+02	No	1.00E+03	No	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	80-56-8	ALPHA-PINENE	ug/m3	5.9	7.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	71-43-2	BENZENE	ug/m3	5.9		ND	2.50E+00	No	2.50E+01	No	2.50E+02	No	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	100-44-7	BENZENE, (CHLOROMETHYL)-	ug/m3	5.9		ND	NA	NA	NA	NA	NA	NA	NA	4.00E-02	No	4.00E-01	No	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	75-27-4	BROMODICHLOROMETHANE	ug/m3	5.9		ND	1.10E+00	No	1.10E+01	No	1.10E+02	No	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	75-25-2	BROMOFORM	ug/m3	5.9		ND	1.70E+01	No	1.70E+02	No	1.70E+03	No	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	74-83-9	BROMOMETHANE	ug/m3	5.9		ND	NA	NA	NA	NA	NA	NA	NA	5.00E+00	No	5.00E+01	No	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	75-15-0	CARBON DISULFIDE	ug/m3	5.9		ND	NA	NA	NA	NA	NA	NA	NA	7.30E+02	No	7.30E+03	No	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	56-23-5	CARBON TETRACHLORIDE	ug/m3	5.9		ND	1.30E+00	No	1.30E+01	No	1.30E+02	No	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	108-90-7	CHLOROBENZENE	ug/m3	5.9		ND	NA	NA	NA	NA	NA	NA	NA	5.10E+01	No	5.10E+02	No	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	124-48-1	CHLORODIBROMOMETHANE	ug/m3	5.9		ND	8.00E-01	No	8.00E+00	No	8.00E+01	No	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	75-00-3	CHLOROETHANE	ug/m3	5.9		ND	2.00E+01	No	2.00E+02	No	2.00E+03	No	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	67-68-3	CHLOROFORM	ug/m3	5.9	1.4	J	8.30E-01	EXCEED	8.30E+00	No	8.30E+01	No	NA	NA	NA	NA	NA	
Q2-VI-02	Q2-VI-02-032508	REG	TO-15	74-87-3</																	

Attachment F
Revised Screening Levels

ATTACHMENT F-1

Indoor Air Screening Levels
 163 Old River Road Building
 Quanta Site, Edgewater, New Jersey

Analyte	Cas #	Cancer / Non-Cancer	Screening Criteria Source	Indoor Air Screening Levels for Carcinogenic Constituents						Indoor Air Screening Levels for Non-Carcinogenic Constituents			
				Revised 10 ⁻⁶ Target Risk Level	Previously Used 10 ⁻⁶ Target Risk	Revised 10 ⁻⁵ Target Risk Level	Previously Used 10 ⁻⁵ Target Risk	Revised 10 ⁻⁴ Target Risk Level	Previously Used 10 ⁻⁴ Target Risk	Revised SLs HQ = 1.0	Previously Used HQ = 1	Updated SLs HQ = 0.1	Previously Used HQ = 0.1
1,1,1-Trichloroethane (TCA)	71-55-6	NC	NJDEP	NA		NA		NA		1.00E+03	2.30E+03	1.00E+02	2.30E+02
1,1,2,2-Tetrachloroethane	79-34-5	C	EPAR2 PRG	3.30E-02		3.30E-01		3.30E+00		NA	2.20E+02	NA	2.20E+01
1,1,2,2-Tetrachloroethane	79-34-5	C	EPAR2 PRG	3.30E-02		3.30E-01		3.30E+00		NA	2.20E+02	NA	2.20E+01
1,1,2-Trichloroethane	79-00-5	C	EPAR2 PRG	1.20E-01		1.20E+00		1.20E+01		NA	1.50E+01	NA	1.50E+00
1,1,2-Trichloroethane	79-00-5	C	EPAR2 PRG	1.20E-01		1.20E+00		1.20E+01		NA	1.50E+01	NA	1.50E+00
1,1,2-Trichlorotrifluoroethane	76-13-1	NC	NJDEP	NA		NA		NA		3.10E+04		3.10E+03	
1,1-Dichloroethane (1,1-DCA)	75-34-3	NC	NJDEP	NA		NA		NA		5.10E+02	5.20E+02	5.10E+01	5.20E+01
1,1-Dichloroethene (1,1-DCE)	75-35-4	NC	EPAR2 PRG	NA		NA		NA		2.10E+02		2.10E+01	
1,2,4-Trichlorobenzene	120-82-1	NC	EPAR2 PRG	NA		NA		NA		3.70E+00		3.70E-01	
1,2,4-Trimethylbenzene	95-63-6	NC	EPAR2 PRG	NA		NA		NA		6.20E+00	6.00E+00	6.20E-01	6.00E-01
1,2-Dibromo-3-Chloropropane	96-12-8	NC	EPAR2 PRG	NA		NA		NA		2.80E+00	NA	2.80E-01	NA
1,2-Dibromoethane	106-93-4	C	EPAR2 PRG	3.40E-03		3.40E-02		3.40E-01		NA	9.50E+00	NA	9.50E-01
1,2-Dibromoethane	106-93-4	C	EPAR2 PRG	3.40E-03		3.40E-02		3.40E-01		NA	9.50E+00	NA	9.50E-01
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	76-14-2	NC		NA		NA		NA		NA		NA	
1,2-Dichlorobenzene	95-50-1	NC	NJDEP	NA		NA		NA		1.50E+02		1.50E+01	
1,2-Dichloroethane	107-06-2	C	EPAR2 PRG	7.40E-02		7.40E-01		7.40E+00		NA	5.10E+00	NA	5.10E-01
1,2-Dichloroethane	107-06-2	C	EPAR2 PRG	7.40E-02		7.40E-01		7.40E+00		NA	5.10E+00	NA	5.10E-01
1,2-Dichloroethane-d4	17060-07-0	NC		NA		NA		NA		NA		NA	
1,2-Dichloroethane-d4	17060-07-0	NC		NA		NA		NA		NA		NA	
1,2-Dichloropropane	78-87-5	C	EPAR2 PRG	9.90E-02		9.90E-01		9.90E+00		NA	4.20E+00	NA	4.20E-01
1,2-Dichloropropane	78-87-5	C	EPAR2 PRG	9.90E-02		9.90E-01		9.90E+00		NA	4.20E+00	NA	4.20E-01
1,3,5-Trimethylbenzene	108-67-8	NC	EPAR2 PRG	NA		NA		NA		6.20E+00	6.00E+00	6.20E-01	6.00E-01
1,3-Butadiene	106-99-0	C	EPAR2 PRG	6.10E-02		6.10E-01		6.10E+00		NA	2.10E+00	NA	2.10E-01
1,3-Dichlorobenzene	541-73-1	NC	NJDEP	NA		NA		NA		1.10E+01	1.10E+02	1.10E+00	1.10E+01
1,4-Dichlorobenzene	106-46-7	C	EPAR2 PRG	3.10E-01		3.10E+00		3.10E+01		NA	8.40E+02	NA	8.40E+01
1,4-Dioxane	123-91-1	NC	EPAR2 PRG	NA		NA		NA		6.10E-01	NA	6.10E-02	NA
1-ethyl-4-methyl-Benzene	622-96-8	NC		NA		NA		NA		NA		NA	
2-Butanone (MEK)	78-93-3	NC	Same	NA		NA		NA		5.10E+03		5.10E+02	
2-Hexanone	591-78-6	NC		NA		NA		NA		NA		NA	
2-Propanol	67-63-0	NC		NA		NA		NA		NA		NA	
4-Bromofluorobenzene	460-00-4	NC		NA		NA		NA		NA		NA	
4-Bromofluorobenzene	460-00-4	NC		NA		NA		NA		NA		NA	
4-Methyl-2-pentanone	108-10-1	NC	Same	NA		NA		NA		3.10E+03		3.10E+02	
Acetic Acid, Ethyl Ester	141-78-6	NC	EPAR2 PRG	NA		NA		NA		7.30E+02	NA	7.30E+01	NA
Acetone	67-64-1	NC	Same	NA		NA		NA		3.30E+03	NA	3.30E+02	NA
Acetonitrile	75-05-8	NC	EPAR2 PRG	NA		NA		NA		6.20E+01		6.20E+00	
Acrolein	107-02-8	NC	EPAR2 PRG	NA		NA		NA		2.10E-02	NA	2.10E-03	NA
Acrylonitrile	107-13-1	NC	EPAR2 PRG	NA	2.80E-02	NA	2.80E-01	NA	2.80E+00	2.80E-02	2.10E+00	2.80E-03	2.10E-01
Allyl chloride	107-05-1	C	EPAR2 PRG	1.00E+00	NA	1.00E+01	NA	1.00E+02	NA	NA		NA	
alpha-Pinene	80-56-8	NC		NA		NA		NA		NA		NA	
Benzene	71-43-2	C	EPAR2 PRG	2.50E-01		2.50E+00		2.50E+01		NA	3.10E+01	NA	3.10E+00

ATTACHMENT F-1

Indoor Air Screening Levels
 163 Old River Road Building
 Quanta Site, Edgewater, New Jersey

Analyte	Cas #	Cancer / Non-Cancer	Screening Criteria Source	Indoor Air Screening Levels for Carcinogenic Constituents					Indoor Air Screening Levels for Non-Carcinogenic Constituents				
				Revised 10 ⁻⁶ Target Risk Level	Previously Used 10 ⁻⁶ Target Risk	Revised 10 ⁻⁵ Target Risk Level	Previously Used 10 ⁻⁵ Target Risk	Revised 10 ⁻⁴ Target Risk Level	Previously Used 10 ⁻⁴ Target Risk	Revised SLs HQ = 1.0	Previously Used HQ = 1	Updated SLs HQ = 0.1	Previously Used HQ = 0_1
Benzyl Chloride	100-44-7	NC	EPAR2 PRG	NA	4.00E-02	NA	4.00E-01	NA	4.00E+00	4.00E-02	1.10E+01	4.00E-03	1.10E+00
Bromodichloromethane	75-27-4	C	EPAR2 PRG	1.10E-01		1.10E+00		1.10E+01		NA	7.30E+01	NA	7.30E+00
Bromoform	75-25-2	C	EPAR2 PRG	1.70E+00	1.80E+00	1.70E+01	1.80E+01	1.70E+02		NA	7.30E+01	NA	7.30E+00
Bromomethane	74-83-9	NC	NJDEP	NA		NA		NA		5.00E+00		5.00E-01	
Carbon Disulfide	75-15-0	NC	Same	NA		NA		NA		7.30E+02	NA	7.30E+01	NA
Carbon Tetrachloride	56-23-5	C	EPAR2 PRG	1.30E-01		1.30E+00		1.30E+01		NA	2.60E+00	NA	2.60E-01
Chlorobenzene	108-90-7	NC	NJDEP	NA		NA		NA		5.10E+01	6.20E+01	5.10E+00	6.20E+00
Chloroethane	75-00-3	C	NJDEP	2.00E+00		2.00E+01		2.00E+02		NA	1.00E+04	NA	1.00E+03
Chloroform	67-66-3	C	EPAR2 PRG	8.30E-02		8.30E-01		8.30E+00		NA	5.10E+01	NA	5.10E+00
Chloromethane	74-87-3	NC	Same	NA		NA		NA		9.50E+01		9.50E+00	
cis-1,2-Dichloroethene	156-59-2	NC	NJDEP	NA		NA		NA		3.60E+01		3.60E+00	
cis-1,3-Dichloropropene	10061-01-5	NC	EPAR2 PRG	NA	4.80E-01	NA	4.80E+00	NA	4.80E+01	4.80E-01	2.10E+01	4.80E-02	2.10E+00
CYCLOHEXANE	110-82-7	NC	Same	NA		NA		NA		6.20E+03	NA	6.20E+02	NA
Dibromochloromethane	124-48-1	C	EPAR2 PRG	8.00E-02		8.00E-01		8.00E+00		NA	7.30E+01	NA	7.30E+00
Dichlorodifluoromethane (CFC 12)	75-71-8	NC	NJDEP	NA		NA		NA		1.80E+02		1.80E+01	
Dichloromethane (Methylene Chloride)	75-09-2	C	NJDEP	4.00E+00	4.10E+00	4.00E+01	4.10E+01	4.00E+02	4.10E+02	NA	3.10E+03	NA	3.10E+02
D-LIMONENE	5989-27-5	NC		NA		NA		NA		NA		NA	
Ethanol	64-17-5	NC		NA		NA		NA		NA		NA	
Ethyl tert-Butyl Ether	637-92-3	NC		NA		NA		NA		NA		NA	
Ethylbenzene	100-41-4	NC	Same	NA		NA		NA		1.10E+03		1.10E+02	
Hexachlorobutadiene	87-68-3	C	EPAR2 PRG	8.60E-02		8.60E-01		8.60E+00		NA	1.10E+00	NA	1.10E-01
Hexachlorobutadiene	87-68-3	C	EPAR2 PRG	8.60E-02		8.60E-01		8.60E+00		NA	1.10E+00	NA	1.10E-01
Isopropylbenzene	98-82-8	NC	EPAR2 PRG	NA		NA		NA		4.00E+02	NA	4.00E+01	NA
m,p-Xylenes	141-78-5	NC	Same	NA		NA		NA		1.10E+02		1.10E+01	
Methyl Methacrylate	80-62-6	NC	EPAR2 PRG	NA		NA		NA		7.30E+02		7.30E+01	
Methyl tert-Butyl Ether	1634-04-4	C	NJDEP	2.00E+00		2.00E+01		2.00E+02		NA	3.10E+03	NA	3.10E+02
Naphthalene	91-20-3	NC	EPAR2 PRG	NA		NA		NA		3.10E+00		3.10E-01	
n-Butyl Acetate	123-86-4	NC		NA		NA		NA		NA		NA	
N-HEPTANE	142-82-5	NC		NA		NA		NA		NA		NA	
N-HEXANE	110-54-3	NC	EPAR2 PRG	NA		NA		NA		2.10E+02	NA	2.10E+01	NA
n-Nonane	111-84-2	NC		NA		NA		NA		NA		NA	
n-Octane	111-65-9	NC		NA		NA		NA		NA		NA	
n-propylbenzene	103-65-1	NC	EPAR2 PRG	NA		NA		NA		1.50E+02	NA	1.50E+01	NA
o-Xylene	95-47-6	NC	Same	NA		NA		NA		1.10E+02		1.10E+01	
Propene	115-07-1	NC		NA		NA		NA		NA		NA	
Styrene	100-42-5	NC	NJDEP	NA		NA		NA		1.00E+03		1.00E+02	
tert-Amyl Methyl Ether	994-05-8	NC		NA		NA		NA		NA		NA	
Tetrachloroethene (PCE)	127-18-4	C	EPAR2 PRG	3.20E-01		3.20E+00		3.20E+01		NA	3.70E+01	NA	3.70E+00
Tetrahydrofuran	109-99-9	NC	EPAR2 PRG	NA		NA		NA		9.90E-01	NA	9.90E-02	NA
Toluene	108-88-3	NC	EPAR2 PRG	NA		NA		NA		4.00E+02	4.20E+02	4.00E+01	4.20E+01
trans-1,2-Dichloroethene	156-60-5	NC	Same	NA		NA		NA		7.30E+01	6.20E+01	7.30E+00	6.20E+00

ATTACHMENT F-1

Indoor Air Screening Levels
 163 Old River Road Building
 Quanta Site, Edgewater, New Jersey

Analyte	Cas #	Cancer / Non-Cancer	Screening Criteria Source	Indoor Air Screening Levels for Carcinogenic Constituents						Indoor Air Screening Levels for Non-Carcinogenic Constituents			
				Revised 10 ⁻⁶ Target Risk Level	Previously Used 10 ⁻⁶ Target Risk	Revised 10 ⁻⁵ Target Risk Level	Previously Used 10 ⁻⁵ Target Risk	Revised 10 ⁻⁴ Target Risk Level	Previously Used 10 ⁻⁴ Target Risk	Revised SLs HQ = 1.0	Previously Used HQ = 1	Updated SLs HQ = 0.1	Previously Used HQ = 0.1
trans-1,3-Dichloropropene	10061-02-6	NC	EPA/R2 PRG	NA	4.80E-01	NA	4.80E+00	NA	4.80E+01	4.80E-01	2.10E+01	4.80E-02	2.10E+00
Trichloroethene (TCE)*	79-01-6	C	NYDOH	5.00E-02		5.00E-01		5.00E+00		NA	3.70E+01	NA	3.70E+00
Trichlorofluoromethane (CFC 11)	75-69-4	NC	Same	NA		NA		NA		7.30E+02		7.30E+01	
Vinyl acetate	108-05-4	NC	EPA/R2 PRG	NA		NA		NA		2.10E+02	NA	2.10E+01	NA
Vinyl Chloride	75-01-4	C	EPA/R2 PRG	1.10E-01		1.10E+00		1.10E+01		NA	1.00E+02	NA	1.00E+01
Vinyl Chloride	75-01-4	C	EPA/R2 PRG	1.10E-01		1.10E+00		1.10E+01		NA	1.00E+02	NA	1.00E+01
Xylenes (total)	1330-20-7	NC	Same	NA		NA		NA		1.10E+02		1.10E+01	

Screening levels that changed from the 2006 Vapor Intrusion Evaluation Work Plan are highlighted.
 The previously used screening criteria are provided in the adjacent column.

ATTACHMENT F-2

Subslab Soil Gas Screening Levels
 163 Old River Road Building
 Quanta Site, Edgewater, New Jersey

Analyte	Cas #	Cancer / Non-Cancer	Subslab Soil Gas Screening Levels for Carcinogenic Constituents						Subslab Soil Gas Screening Levels for Non-Carcinogenic Constituents			
			Revised Target Risk Level	Previously Used 10-6 Target Risk	Revised Target Risk Level	Previously Used 10-5 Target Risk	Revised Target Risk Level	Previously Used 10-4 Target Risk	Revised SLs HQ = 1.0	Previously Used HQ = 1	Updated SLs HQ = 0.1	Previously Used HQ = 0_1
1,1,1-Trichloroethane (TCA)	71-55-6	NC	NA	NA	NA	NA	NA	NA	1.00E+03	2.30E+03	1.00E+04	2.30E+04
1,1,2,2-Tetrachloroethane	79-34-5	C	3.30E-01		3.30E+00		3.30E+01		NA		NA	
1,1,2-Trichloroethane	79-00-5	C	1.20E+00		1.20E+01		1.20E+02		NA		NA	
1,1,2-Trichlorotrifluoroethane	76-13-1	NC	NA		NA		NA		3.10E+04		3.10E+05	
1,1-Dichloroethane (1,1-DCA)	75-34-3	NC	NA		NA		NA		5.10E+02	5.20E+02	5.10E+03	5.20E+03
1,1-Dichloroethene (1,1-DCE)	75-35-4	NC	NA		NA		NA		2.10E+02		2.10E+03	
1,2,4-Trichlorobenzene	120-82-1	NC	NA		NA		NA		3.70E+00		3.70E+01	
1,2,4-Trimethylbenzene	95-63-6	NC	NA		NA		NA		6.20E+00	6.00E+00	6.20E+01	6.00E+01
1,2-Dibromo-3-Chloropropane	96-12-8	NC	NA		NA		NA		2.80E+00	NA	2.80E+01	NA
1,2-Dibromoethane	106-93-4	C	3.40E-02		3.40E-01		3.40E+00		NA		NA	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	76-14-2	NC	NA		NA		NA		NA		NA	
1,2-Dichlorobenzene	95-50-1	NC	NA		NA		NA		1.50E+02		1.50E+03	
1,2-Dichloroethane	107-06-2	C	7.40E-01		7.40E+00		7.40E+01		NA		NA	
1,2-Dichloropropane	78-87-5	C	9.90E-01		9.90E+00		9.90E+01		NA		NA	
1,3,5-Trimethylbenzene	108-67-8	NC	NA		NA		NA		6.20E+00	6.00E+00	6.20E+01	6.00E+01
1,3-Butadiene	106-99-0	C	6.10E-01		6.10E+00		6.10E+01		NA		NA	
1,3-Dichlorobenzene	541-73-1	NC	NA		NA		NA		1.10E+01	1.10E+02	1.10E+02	1.10E+03
1,4-Dichlorobenzene	106-46-7	C	3.10E+00		3.10E+01		3.10E+02		NA		NA	
1,4-Dioxane	123-91-1	NC	NA		NA		NA		6.10E-01	NA	6.10E+00	NA
1-ethyl-4-methyl-Benzene	622-96-8	NC	NA		NA		NA		NA		NA	
2-Butanone (MEK)	78-93-3	NC	NA		NA		NA		5.10E+03		5.10E+04	
2-Hexanone	591-78-6	NC	NA		NA		NA		NA		NA	
2-Propanol	67-63-0	NC	NA		NA		NA		NA		NA	
4-Bromofluorobenzene	460-00-4	NC	NA		NA		NA		NA		NA	
4-Methyl-2-pentanone	108-10-1	NC	NA		NA		NA		3.10E+03		3.10E+04	
Acetic Acid, Ethyl Ester	141-78-6	NC	NA		NA		NA		7.30E+02	NA	7.30E+03	NA
Acetone	67-64-1	NC	NA		NA		NA		3.30E+03	NA	3.30E+04	NA
Acetonitrile	75-05-8	NC	NA		NA		NA		6.20E+01		6.20E+02	
Acrolein	107-02-8	NC	NA		NA		NA		2.10E-02	NA	2.10E-01	NA
Acrylonitrile	107-13-1	NC	NA		NA		NA		2.80E-02	2.10E+00	2.80E-01	2.10E+01
Allyl chloride	107-05-1	C	1.00E+01		1.00E+02		1.00E+03		NA		NA	
alpha-Pinene	80-56-8	NC	NA		NA		NA		NA		NA	
Benzene	71-43-2	C	2.50E+00		2.50E+01		2.50E+02		NA		NA	
Benzyl Chloride	100-44-7	NC	NA		NA		NA		4.00E-02	1.10E+01	4.00E-01	1.10E+02
Bromodichloromethane	75-27-4	C	1.10E+00	1.10E+00	1.10E+01	1.10E+01	1.10E+02		NA		NA	
Bromoform	75-25-2	C	1.70E+01	1.80E+01	1.70E+02	1.70E+03	NA		NA		NA	
Bromomethane	74-83-9	NC	NA		NA		NA		5.00E+00		5.00E+01	
Carbon Disulfide	75-15-0	NC	NA		NA		NA		7.30E+02	NA	7.30E+03	NA
Carbon Tetrachloride	56-23-5	C	1.30E+00		1.30E+01		1.30E+02		NA		NA	
Chlorobenzene	108-90-7	NC	NA		NA		NA		5.10E+01	6.20E+01	5.10E+02	6.20E+02
Chloroethane	75-00-3	C	2.00E+01		2.00E+02		2.00E+03		NA		NA	
Chloroform	67-66-3	C	8.30E-01		8.30E+00		8.30E+01		NA		NA	

ATTACHMENT F-2

Subslab Soil Gas Screening Levels
 163 Old River Road Building
 Quanta Site, Edgewater, New Jersey

Analyte	Cas #	Cancer / Non-Cancer	Subslab Soil Gas Screening Levels for Carcinogenic Constituents						Subslab Soil Gas Screening Levels for Non-Carcinogenic Constituents			
			Revised Target Risk	Previously Used 10-6	Revised Target Risk	Previously Used 10-5	Revised Target Risk	Previously Used 10-4	Revised SLs HQ = 1.0	Previously Used HQ = 1	Updated SLs HQ = 0.1	Previously Used HQ= 0_1
Chloromethane	74-87-3	NC	NA		NA		NA		9.50E+01		9.50E+02	
cis-1,2-Dichloroethene	156-59-2	NC	NA		NA		NA		3.60E+01		3.60E+02	
cis-1,3-Dichloropropene	10061-01-5	NC	NA		NA		NA		4.80E-01	2.10E+01	4.80E+00	2.10E+02
Cyclohexane	110-82-7	NC	NA		NA		NA		6.20E+03	NA	6.20E+04	NA
Dibromochloromethane	124-48-1	C	8.00E-01		8.00E+00		8.00E+01		NA		NA	
Dichlorodifluoromethane (CFC 12)	75-71-8	NC	NA		NA		NA		1.80E+02		1.80E+03	
Dichloromethane (Methylene Chloride)	75-09-2	C	4.00E+01	4.10E+01	4.00E+02	4.10E+02	4.00E+03	4.10E+03	NA		NA	
D-LIMONENE	5989-27-5	NC	NA		NA		NA		NA		NA	
Ethanol	64-17-5	NC	NA		NA		NA		NA		NA	
Ethyl tert-Butyl Ether	637-92-3	NC	NA		NA		NA		NA		NA	
Ethylbenzene	100-41-4	NC	NA		NA		NA		1.10E+03		1.10E+04	
Hexachlorobutadiene	87-68-3	C	8.60E-01		8.60E+00		8.60E+01		NA		NA	
Isopropylbenzene	98-82-8	NC	NA		NA		NA		4.00E+02	NA	4.00E+03	NA
m,p-Xylenes	XYLENES1314	NC	NA		NA		NA		1.10E+02		1.10E+03	
Methane	74-82-8	NC	NA		NA		NA		NA		NA	
Methyl Methacrylate	80-62-6	NC	NA		NA		NA		7.30E+02		7.30E+03	
Methyl tert-Butyl Ether	1634-04-4	C	2.00E+01		2.00E+02		2.00E+03		NA		NA	
Naphthalene	91-20-3	NC	NA		NA		NA		3.10E+00		3.10E+01	
n-Butyl Acetate	123-86-4	NC	NA		NA		NA		NA		NA	
N-Heptane	142-82-5	NC	NA		NA		NA		NA		NA	
N-Hexane	110-54-3	NC	NA		NA		NA		2.10E+02	NA	2.10E+03	NA
Nitrogen	7727-37-9	NC	NA		NA		NA		NA		NA	
n-Nonane	111-84-2	NC	NA		NA		NA		NA		NA	
n-Octane	111-65-9	NC	NA		NA		NA		NA		NA	
n-propylbenzene	103-65-1	NC	NA		NA		NA		1.50E+02	NA	1.50E+03	NA
o-Xylene	95-47-6	NC	NA		NA		NA		1.10E+02		1.10E+03	
Propene	115-07-1	NC	NA		NA		NA		NA		NA	
Styrene	100-42-5	NC	NA		NA		NA		1.00E+03		1.00E+04	
tert-Amyl Methyl Ether	994-05-8	NC	NA		NA		NA		NA		NA	
Tetrachloroethene (PCE)	127-18-4	C	3.20E+00		3.20E+01		3.20E+02		NA		NA	
Tetrahydrofuran	109-99-9	NC	NA		NA		NA		9.90E-01	NA	9.90E+00	NA
Toluene	108-88-3	NC	NA		NA		NA		4.00E+02	4.20E+02	4.00E+03	4.20E+03
trans-1,2-Dichloroethene	156-60-5	NC	NA		NA		NA		7.30E+01	6.20E+01	7.30E+02	6.20E+02
trans-1,3-Dichloropropene	10061-02-6	NC	NA		NA		NA		4.80E-01	2.10E+01	4.80E+00	2.10E+02
Trichloroethene (TCE)	79-01-6	C	5.00E-01		5.00E+00		5.00E+01		NA		NA	
Trichlorofluoromethane (CFC 11)	75-69-4	NC	NA		NA		NA		7.30E+02		7.30E+03	
Vinyl acetate	108-05-4	NC	NA		NA		NA		2.10E+02	NA	2.10E+03	NA
Vinyl Chloride	75-01-4	C	1.10E+00		1.10E+01		1.10E+02		NA		NA	
Xylenes (total)	1330-20-7	NC	NA		NA		NA		1.10E+02		1.10E+03	

[Redacted] Screening levels that changed from the 2006 Vapor Intrusion Evaluation Work Plan are highlighted.

The previously used screening criteria are provided in the adjacent column.